# THETIMES Higher Education

# Universities 'will resist expansion without cash'

in their provisional grant fur that year, according to informed univer-

is now thought likely that, in Authorities, the Department of Education and Science will allot to universities at least 305,000 of the 560,000 higher education places in

University Grants Committee, cur-rently discussing the division of numbers with the DES, will crass expansion without more

money. Earlier this year the HGC tabl universities that thuic provisional grant for 1980/81 was £565m, at 1977/78 prices and assuming the same level of fees as this year. This was un increase in three years of less than 2 per cent.

hers were expected to grow by 5 her cont, the UCC said. "The greatest number for which, in the committee's present indement, the provisional grant for 1980-81 can be described by the control of the con

Universities will not ogree to take the larger shove of ligher education in 1980/81 without an increase in their provisional grant for the sales and over the sales are the sales and over the sales. on the other, that an even more modest objective might be set."

It is unlikely, therefore, that the UGC will agree to an increase to 305,060-310,000 without a revision of the pravisional 1980/81 grant.

The interen split of the 560,000 Authorities, the Department of students between university and Education and Science will allot to polynechnic sectors is on of the miversities at least 305,000 of the with the original proposals in the 980/81.

But it is understand that the bers be divided equally between the

The reasoning behind it is thought to be that universities, unlike puly-technics, can take more students without extra buildings. But while CLEA has recommended an uneventivision to the DES, some local authorities, untobly Sheffield, believe there should be comparable granth between the sectors. growth between the sectors.

Mr S. B. Himson, a senior assistout education officer at Sheffield

provisional grant for 1981/81 can be regarded as adoquate wis about on the distribution of higher educa-290,000. But there remain open the

# Sir Nevill wins Nobel prize

Twenty years of ploneering work the properties of disorder solids hove been rewarded with a Nubel prize for Shr Nevill Mott, 72-yearold Emeritus Professur at Combridge University.

bridge University.

He shares the physics prize with two leading American solid stone physicists. Professor John Von Vicek of Harvord, who is 78, and Dr Philip Amicrson, 54, of Bell Laboratories, Dr Anderson worked part-time at Cambridge's Cavendish Laboratury for eight years up to 1975.

Sir Brion Pippard, who succeeded Sir Navill as head of the Cavendish in 1971, said he had been a leader for 45 years and had started innumerable schools of thanglu. Sir Noville began the work—on noo-erystulline suids such as glasser—for which he shoves the £83,000 Nobel prize in the mid-1950s.



# America confronts race issue

continued from front noge

A vast manber of people have interest in the outcome, and a record number of 58 briefs, repre-senting 160 groups, have been filed with the court. The most important testimumy is that of the Govern-

On Wednesday the Justice De-partment argued forcefully that race can and should be taken into account in determining oniversity admissions. It opposed "rigid exclusionary quotas" but upled numerical goals. It said the Bakke cose their makes part one of admitted who is not able to cope with university work, but admissions officers would to have my judgment about the day of the four points: the extent of an exist university work afternative of the four points: the extent of an exist of the four points. oction programmes, and suggested souther the case back to California

southing the case back to California for further review.

The Government brief has been proised by blacks but criticized by outly others for being too furzy and sidestepping, the Issue of quotas. Fresh and powerful support was given to it howover last week by the of the most authorizative education think-tanks in the country—the Correctia Council on Policy Studies in Higher Education.

The council released o detailed study of selective admissions, drown

The council released o detailed study of selective admissions, drown up by the Educational Testing Service—the body that administers most of the tests on which Bakke bases his claim. Significently the study reaches almost exactly the same conclusions as the government, though approaching the matter from ocodemic, not legal, considerations.

The council released o detailed country as a whole takes o for harder line,

A poll found overwhelming public opposition to any special programmes for ninorities and though a predominantly black frown auch as Wesleington has been holding public demonstrations in "overtime the matter from ocodemic, not legal, considerations."

Takek Kerr, the council chairman country in his layour.

oud former president of the Univorsity of Culifornia, said race should
be tuken into account in admissions.
The council and FTS believe tests
are useful but insufficient in themselves in deciding admissions, Student selection should he in two
phases: first, determining the pool
of qualified applicants who were
able to do the work at callege, and
then picking students from that
phol.

are two four prints: the extent of an applicant's educational disudvantage, his escial disodvantage, his possible contribution us a graduote to an andoserved sector of cheliary of Local Education Authority society.

Carnogie represents mainstream liberal academic thought on this case. Its position is similar to that of most major, universities, liberal newspapers such as the Naw York Tiotes and Washington Post, and eivil rights, activists. But the country as a whole takes o for harder line,

# BR arrange **AUT** pay demo specials

there's of a rally in Lundon on November 16.

The rully, which will include a lobby of Porllament, is in support of the lecturer's pay claim now before the Government. At least 15,000 lecturers are expected to attend.

Beithe Rail have manual to the support itself, which Is almost as

cellors asking them to attend per-sanally. They have also asked them to recognize that many staff will wish to rearrange their commitments

in order to attend.
Local APT branches have been asked to put furward mutious to thoir senures and anverting hodies calling an them to support the pay claim of between 12 and 16 per

lecturers a starting salary £150 in exces of the official Association of lanuched this week.

lanuched this week,

The Association of Scientific,
Technical and Managerial Staffs,
representing 2,000 university teochers, has written in the Government saying lecturers should start
in 14,366 a peak rising to 18,718
Professors' solaries should average
112,500

C12,500.

Under the AUT's two-part claim, announced hast week, lecturers would start on about £4,200 with a professibility of the AUT's two-part claim, announced hast week, lecturers would start on about £4,200 with a professibility of the AUT's proposed the University Anthorities thurt.

The ASTAIS proposals, unlike those of the AUT's represent no increase in the ratio sequenting the suborles of young lecturers and those of readers and professors. Under the AUT's scheme the professorial rates would increase by nearly 40 per cent ugainst a 27 per cent increase at the hottom of the lecturer grade.

The ASTMS supports the principle of dividing the university teachers pay claim into two halves, one in recify the "historical one in realfy the "tilstarical anomaly" in pay duting back to 1974, the other in curer cost of living increases thirting the current

### Wide variations in local grant policies

Only one lucol outhority la Eng-land and Wales antomotically pays course feas far Open University students, according to a survey of incol educotion unthority awards carried out by the National Union of Students.

Thirty-one outhorities soid they did not pay fees; one pald in occordance with regional ogreed policy, two considered applications in merit, 14 considered hardship cases and there were several other yarlations.

# Optimism greets pessimistic MRC annual report

British Rail we to run six special troins in cope with an expected the Medical Research Council's annual report was published this

lobny in the lecturer's pay craim.

for the Government. At least 6,000 lecturers are expected to attend.

Iltrick Rail live agreed to run extro trains from Manchester, Livernal, Neaccustle, Wales, Sheffold and Ilirotinghum and to offer cheop faces.

Additioning from the University the least with disrupted fixed training from a consistion of University the least on, as a result of a two per cent cut in the council's two per cent cut in the council's least 1977/78.

two per cent cut in the council's income for 1977/78.

But the repure deals with the year up to Morch 1977. Since then the MRC has acquired a new secretory, terms of u very great income for the council on the time. Dr James Gowons, and apparently a much begger fluoretal mulook. At the publication press conference its Gowons carefully distanced himself from the contents of the united report and gove his own more cheer-

report and gove his own nonce cheer ful assessment of future prospects.

The council treard recently that its share of the Covernment Science Vmg in the coming year will be 1.6 per rem up in real terms on the work of the form its contribution in the MRC for commissioned research this year, is to give hack (701,000 in 1978/79).

Therefore the MRC has restored the flow of funds for hung-term that the stores with less stages of the flow of funds for hung-term.

**Engineering job-hunters** may get new-look PhD A proposal to abandon the conven-local research PhD as a major means of postgraduate training for engineers is being considered by the Science Research Conneil's Engin-tering Board.

An laterin report of the board's education and training punel concludes that the traditional PhD is

October 21, 1977 No 311

LUMP FERTILIZER LTD.

WE COULD

DOWITH A FEW

MORE Ph. D

CHAPPIES

# Funds for policy institute's top priority, SSRC told

Final-raising for the proposed policy studies Institute has top priority, Mr Herck Robligson, Chairman of the Social Science Research Cooneil, will tell the council which is meeting today.

Le will urge members of the council of a simulate interest amount their

the will arge members of the caun-ch to shimbare laterest among their indostrial contacts. In the SSRI's Com "British Brookings" project, Mr Rahinson, of Magdalen College, Oxford, has meetings planned with, among others, Lord Ruthschibl. Ife will be usked how tirnt is the cannitosem of the Ford Founda-tion of America to the SSRC's scheme, particularly in light of the foundation's apparent Interest in se-ting up a "Entropean Brookings". In the summer, contact between

In the stimmer, enutaet between the SSRC and Ford foundation staff led to at offer of "jouthr partnership" to the SSRC's scheme. The foundation would undertake to enutational on to £101,400 a year probably for 10 years, provided no to £400,000 a year was found from other sources.

Accurding to Ford Foshist education and training punct communities members the foshist cludes that the traditional PhD is not appropriate training for work in most sections of the engineering industry. A survey by the punctification in a positive analysis institute in the sections of the engineering industry. A survey by the punctification in the property of the engineering industry. A survey by the punctification in the property of the engineering industry. A survey by the punctification in the property of the confidential from the players for most graduates trained in York next month at which is accorded to the confidential respective to the property of the confidential respective for the property of post surgests, is no substitute new york of the confidential companies and other industry rotated schemes—for the functional PhD. In 1976, 665 and the meaning of the confidential property of the confid

(programme) grouts, and soil researchers ore being sau to apply fur them. Shortlers just in grants ore being saute

The unnual report

after the Government inches Inril Rothschild's place in tween research councils with

terms of a very great many colls on the time of expension who are limited in making whose involvement in adving desirable.

nther sources.

In a new body.

From new tenching companies are to ga allead with the joint support of the Science Research Committee and Department of Industry. Thry bring to 11 the number of schumes oppraved since the Tooching Company Programme artered on a trial basis in 1975.

The four new volumes of the support of the four new volumes on a trial basis in 1975.

The four new volumes are the support of the

me study; which is based on a proposed since the Tooching Company of Students of Students

SRC chairman, emphasized the ren-lative nature of the punel's plans. lis final report on postgraduate trolling will be produced next yen for consideration by the engineering broad and full council. The SRC was not preparing to ahundan traditional methods, he said; it was discussing where in

strike the balance between them and the new schemes. If the council were to provide postgraduate troining without a resourch ele-ment the academic staff involved would still have to do research.

The panel suggests a new taugh reflewing pulicy for advanced engineering courses, too many of which ore mariband, ignored by industry and duminated by overseas students. Courses would be reviewed dents. Comises would be reviewed every five years and coordined recignition would depend on string industrial support and evidence that students were subsequently finding jobs in industry. The minimum number of British students would be five or, preferable in

# Poly funding plan splits DES and local authorities

THE TIMES

Higher Education

SUPPLEMENT

Local anthority representatives have presented an uncompromising defonce of their stoke in higher other cution in their official submission to the Oakes committee, currently

They have rejected out of hand the emicept that all, or must, of the money that polytechnics and cul-leges receive should be provided by central government, Instead they propose in a confidential paper to the committee a nationwide recomment ment scheme to equalize the burden of fluorising advanced further colo-

cution.

This hard line is significant because from the time the terms of reference fur the Oakes handry were drawn up it has been tacitly admitted that they hald a power of veia. But in a second virtublished

But In a second unpublished paper to the committee the Depuriment of Education and Science officials have strongly apposed the plan for a recomment scheme, under which authorities are companied for authorities, in place of direct funding. This tradimental disagreement will, inevitably, delay the report's publication, uriginally study at the end of the year.

The cult for a untimivide system of recomposite has been made by the influencial Association of Metropolitan Authorities. The AMA of report to Oakes orgues ogainst a

report to Oakes orgues ogainst o system of direct exchequer fooding distributed in institutions by the new mitional body proposed by Oakes. It also rejects outright o ones. If any letter model for most higher education funds to be channelled through a newly modified pool with a proportion of individual local education authority contributions.

CNAA to give colleges more

tem, with the new national body substituting for the existing pooling committee, would be a "reasonable second choice".

second choice".

Comments drawn up on the AMA proposols by DES officials are also noder consideration by the Dukes committee. This paper argues strongly against recompanent and the substitution of the existing pooling committee by a new national body.

body.

It says: "The AMA justifies recomponent on the basis that unthorhies benefiting would be required to pay. This argument would have force if recomponent applied to all higher education including universities, direct grant institutions, or if there was a close correlation between the numbers of students individual undorthies supported to the public and private sectors respectively and if all odvonced courses attracted mandaodvonced courses attracted manda

tory awards,
"It is difficult to proid the conclusion that there is no fairness in a recumpment system opplied to the public sector uluae and that recompment would projudice its development in general, and that of

discretionary awards in particular."

On the proposal to scrap the present proling committee the DES paper says: "Such an arrangement would divorce management at the central level ondrely from financial regressibility."

central level oncirely from financial responsibility."

The AMA recoupment system would have a central bady with finections to approve new courses, fix recoupment rates dependent on staffing ratius and envolution manbers, approve expenditure on accommodation and capital equipment for the purpose of profiling and ensure "free trade" of students between authorities.

ensure "free trade" of students hetween untharlities.
One of the essential cornerstance of the AMA concept would be the central body's role of upprawing new coorses and notifying the institution concerned which recomponent fate should be charged.

The Oakes committee's and group on various!

defice that students were subseone-thy fluding jobs in industry.
The minimum number of British
students would be five or, preferubly, 10.
The report recognizes the propossis may meon a substantial redurtion in the number of recognized
courses.

A recomposit system "100 for concerned which recomposit rate
should be charged. The Oakes committee's sub group
but with the essential addition of
much firmer control "deserves the
foakes committee's backing, says the
AMA paper. But it concedes that a
fourth Oakes proposal for the continuation of the present pooling sys-

# London convocation votes against

# Comments

Lévi-Strauss



David Dickson talks to the distinguished anthropologist in the first of a series of profiles of French intellectuals, 7

#### The New Left

David Caute reviews a new book on the decline of the New Left; Colin Crouch on the differences between social democracy in Sweden and Britain, U

#### Teaching the teachers

Staff development in universities, polytechnics and medical schools compared, 6

#### Policy studies

s the failure to establish a British Brookings an example of the \* British disease" it was meant to cure? Leader, 10

#### Graduate jobs

Bill Kirkman discusses the background to this week's

frum irces.	•		votes against	background to this we	ek's
rents earch	say on course v	alidation	press closure	figures on graduate	
oard	by Petor David	the wappropriate GNAA solliett	London Universities tonavocation this wask voted by an overwhelming molority occurs neurosula to	employment, 9	· · · · ·
pre-	The Council for National Academic Awards is to revise its procedures	An officers' paper prepared by the council argues that the presence	close the Athlona Press.	WEST TREATMENT WAS TRANSPORTED	
were essor	for validating degrees and diplomas to enable "ucodemically mature"	of CNAA numinees on the college cummittees would overcome the	The joint controlltee of the court ond senate for collective planning recently proposed the closure of	King Abdul Aziz	
llege. lered	polytachnics and culleges to play a bigger part in the scruthy of	systems to bacoma "bureaucronic	the pross, which publishes books originating within the university		
meet-	their own courses,	and monageriol rother than academic it it would also mean to	that might not otherwise find a publisher.	A 16-page report on o	
one L the	A smoll working party has been set up under the choirmanship of	practice that the council's aubject boards would seldom refuse to ratily recomposidations couling ont		of Saudi Arabia's new	,
finod	Dr Edwin Kerr, the chief officer, and will meet for the first time next month. It has been given until	of the valldating committaes,	JET prepares for	universities, I—XVI	٠.
visor (	May 1978 to reconnected changes in the present system of validation	advantage of such a scheme is that it would enable it to develop o	Culham touchdown		All the second
The come wards	hility to individual institutions but	closer knowledge of Individual lit- stitutions and judge their degree	The Iwo year uld row avar, the stiling of JET, the £120m European thermo-	North American/overseus	news 4
One-	preserve the CNAA's overall cuntrol of ucademic stoodards.	of academic maturity. It could lead, the report says, to the establish-	nucleur fusion project, is likely to be sottled of a meeting of the EEC	Don's diary	5
tivo-	One of the most ravolutionary	ment of an atmosphere of confi- dence and a degree of callabora-	research cuuncil on Tuesday. The British and Genoton prime	Research	S
iluste	changes being considered is the establishment of validating commit-	lion that would permit the institu- tion to develop its procedures for	ministers ogreed this week to abide by a majority vote of the conneil.	Noticeboord	8
s cop.	mandante to Dinity and Ochica	propusing and monitoring courses and thereby, become near respon-	The United Kiogdom candidate, Culhum, is expected to win, in	Letters	10
	levels. The committees not CNAA	sible for malicialning academic stun-	return for an assurance that any	Books	11-14
	nominees and thair recommenda- tions would havo to be catifled by	dards	fallow-up fasiun project will be sited at Gaeching In Bayaria.	Classified index	15



Union figh Cardiff lecturers call

Lecturers in the Cardiff branch of the Association of University Teachers have expressed grave concern about the government of University College, Cardiff and have called for its complete reform.

The association joins the college's non-professorial staff in calling for the revision of regulations governing appointments committees.

ne appointments committees.
The remarks form port of the

association's response in the francis report which was prepared ofter a dossier had been found by students that showed two lecturers

# Poly 'third force' idea collapses

Attempts to strengthen the collective voice of the polytechnics by setting up a mathematic restriction of governors collapsed last week in the face of apposition from the Comunitee of Directors of Polytechnics and the Council of Local Education

Gaveroors decided not to go shead with the new body after representatives of only 13 am of the 30 notytechnics turned up at a seminar in Lumban to discuss a draft constitution. The seminar, spon-sared by North East London Pulytechnic, broke up prematurely when the governors prasent roted over-whelmingly against forming un asso-

A similar meeting in February mastered substantial support and resulted in the formation of a tworking party to draw op a constitution.
But in the intervening mounts both the CPD and the CLEA mode it

support a new association with public intuney. The CDP, 100, refused to meet members of the working party. A letter from Mr P. L. Flourerday, the committee's secretary, said: "The CDP does not wish to be associated with a subset in the princes of developing a new line of thought which may in may interpret to have the facking of the amount prince to have the facking of the amount prince to have the facking of the amount prince to have the facking of the amount of the chairment of governors."

lustead, the CDP has decided to Instead, the CDP has decided to stage a joint meeting with chairmen in mid-November. A circular letter from Mr Arthur Sandalby, chairman of the CDP, described his policy as "working through quiet diplomacy and reason" rather than "the adoption of challenging public oustures".

Alterman A. F. G. Edwards, chairman for the stage of joint meeting with governors at NELP, such the governors had come only after the governors had proposed setting ap an association of their own. "I do not think that governors of puly technity are of such a trivial nature that they can accomize when the

the CPD and the CLEA mode it the corresponding to the creation of a third force.

The CLEA declined an invitation of the covernors' working party and told member authorities that it would be "undestrable" to the polytechnics.

The CLEA declined an invitation of Education and Science about static voice that prepresentations to the CDP was reported to have tidd dent numbers, overseas stadent quotas and other matters of major concern to the polytechnics.

in determine polytechnic before it is determined for us. Alderman A. F. G. Edwards, chalr-But the CDP's inlimite failed to satisfy advocates of the new association, who book inleadings of last eyeck's seminar or criticize the political performance of the committee.

Dr. George Brussn, alrector of the special velocity and solid the obsence of a callection with the same of the committee.

In Partsmonth Polyled: die procedures of government of association has about 300 rd. die college.

at Laurhester about 200, and college.

to the question of appointments between 150 and 200.

recognition by Indich Indd

hy Indian Indd

Referentia are being bet judytechnics this weekst. Association of Polytechnics

Association of Polytechek 1 fight to gain recognic reference, or athless are heing curried out at le Portsmanth and North Le the Coremment's Arbitist and Advisory Continuous and Continuous

They form par of me chilch hus been soles out a your and which his siles.

recontinend whether

linu conditions of &

The association dia

4,000 members companded National Association of

Further and Higher which hus more than the

hers in the polytechny, represents teachers in the cation and teacher train

It usked ACAS to fate

bical authorides refused inize it for local negotiation fur it has achieved recognithe pulytechnics of Huff, and Northern Ireland

An APT spokesman will are portleularly strong his ship in these colleges and should be allowed to repre-

This week's openionalist all lecturers at the three parties whether they belong to relicit one they would like the sented by. The APT amphalia it is not asking the sentents paper by the 17th century Chinese urlist Wang Shih-min is one of the Chinese paintings of the Chine Oynosty currently on show at the Brillsh Museum's televiol Gallory.

it is not asking a the say representation at a animal estainty negotiotions. It is been ACAS will make a recognition its fuvour by Christan in its fuvour by Christan in A spokesman for the said its negotiating receivable operation is negotiating receivable of the same in the state. If the state is not the same in the same as other teachers in fasts higher mineration.

the AUT tays it is amazed that the report excused the incitation to one of the lecturers to monimate his

men ussessors.
"Cardiff AUT is absolutely unable to accept that the composition of an expediments committee should be blusted in farour of my particulac camilidare and references the accepted view that appointment pracedores and practices must be and he seen to be scrapolously impar-tial."

The ossociation says it is unable to endursa the report's cammendation of the principal's uctions and helleves that the creation of a choir of science education should have been fully considered within the collete.

students that showed two lecturers had been approached by the college principal, Dr. C. W. Bevon, before succrisements for their july variances oppeared.

The findings of the inquiry which was headed by Mr. H. E. Francis were accepted by the college council oud administration. The report said the lecturers had been appointed according to proper pracedures. sion of college government, the disclosure to senate of more de-tailed financial information and the pracedures.

But the association says that the Prancis repair "canbodies voluces and artifacter which are damaging to the university community and unacceptable as a basis for the future development of the college".

A cantalities was set up by the Senate on October 3 to consider the procedures of government of tailed financial information and the cuding of the system of determining professore' salories by the drawing up of a professorial salary scale. It also wants all correspondence with candidates to be made available to atembers of an appointments committee and fair methods for nominating external assessors, which it cover should be evicial. which, it says, should be strictly

## Academic job chances 'are virtually nil'

Job opportuoities for gradumes in the academic world have virtually disappeared because of spending cuts and the small number of ler-

# hard for for total college reform

The National Union of Students has neged the Manpower Serrices Com-mission to re-evanding the organiza-tion and educational content of its training schemes to ensure that all young people, including the unregis-teerd, are effectively reached.

In its submission in the MSC "Education, Training and Employment—A Cooperative Approach", the NUS recommends that substantial powers should be devolved from the proposed regional boards to "commanity foroms" operating at local level.

The ossociation says it is anable to endurs the report's cammendation of the principal's actions and believes that the creation of a choir of science education should have been fully considered within the college.

"A let's get on with it" outitade threatens the values which universities strive to maintain in the face of increasing hostility from bath whitout and within."

The association demands a revision of college government, the disclosure to senate of more detailed financial information and the

Apart from overseeing the practical implementation of the programmes the formus would ensure that oil MSC students are fully informed of their employment and cantinuing educational appurtunities when they leave schemes.

To custive that these schemes will reach all young people, the NUS believes that more "outreach" staff—who will identify young registered unemployed—than the proposed 20 must be appointed. It recommends that a number be appointed by each board.

It also emphasizes the importance of youth forams os proposed by die British Youth Council and recommends that a representative should be sppointed as a fail member on each board. Moreover the appointment of both NUS and BYC representatives on the National Management Board could also make a positive contribution.

for example.
The MSC is urged to establish

Grass roots contact urged for MSC

clear educational objectives with a rocational and non-yocational element to include, among uthers, the development of numeracy, the development of numeracy, literacy, and aral skitls, Job finding/keeping skills and the deretopment of an ultround knowledge of legal entitlements.

In this context the MSC should lny down close guidelines on work experience which should out he left only to the employers. In all cases the cooperation of further education staff should be sought.

The NUS recommends rhat in the search for existing educational resources which can be deployed to support the schemes, the commission should approach leas and look in particular at those colleges of education (aclug closure.

Criticism of the financing pro-possis for MSC students are made, seeing them on one hund as dis-incentives to students, who in mony cases would do better on supplo-orenisty benefits, and on the other to those in full-time education on lower discretionary awards or nu awards of oil. Therefore, the NUS urges the

in the long term, the NUS ne-lieres that education under the DES and training under the Department of Employment should be inerged into ane unified structure and that the MSC could achieve immense progress by securing the close co-operation of all those within fur-ther education, drawing on the extensive resources and expertise existing within farther education.

Furthermore, it recommends the MSC to adopt a longer term approach than its present fire-year examplement since it believes that cominulate education, and tabletes.

guaranteed minimum allowance for all young people staying on in edu-cation after the age of 16.

As a first step in orcreming these disincentives and to examine the litterrelationship between mandatory awards, lead financing and MSC functing, the NUS believes that it should relate the second

MSC finacting, the NUS believes that it should undertake an annual review of award lorels with the MSC on the same lines as that already existing with the DES.

Moreover, in order that it can be empowered to represent MSC students unitionally at both this level and others, it recommends that they should be encouraged to become members of the union.

In the long term, the NUS he-

In the long term, the NUS he-

Government to undertake a community education and training thoroughgoing review of functing has become necessory for oil young people and will continue to be so in education to establish a uniform

# Think again on young jobless'

Pressure is growing for the Manpower Services Commission to think lug last week with Mr Richard
again obout its plans for administering the Government's new £160m-aCLEA officers argaed that the area year troining programme for the young unemployed.

Both the Cunnel of Locol Educo-tion Authorities and the Notional Association of Teachers in Further and Higher Education have said that the number of regional boards the MSC propuses—21 in all—will be too few to co-operate affectively with local education authorities and colleges taking part in the training schemes.

officer teams creoted by the commission to administer the scheme should include "link men" allocated to each local education outhority.
Both the CLEA and NATFILE are

expressing for notional machinery to reimburse local education authoritics and colleges for the costs incurred as a result of the MSC

with local education authorities and colleges taking part in the training schemes.

A NATFIFE document submitted to the MSC says that even where it proves impossible to increase the number of boards, the MSC should create "an effective sub-structure at a level which can genutuely be inscribed as local". The NATFHE puper also aska for the right to nonlinate members to sit on the major boards.

The CLEA, too, is anxious about the romoteness of the boards the from the civil servicu stoff involved.

# Mrs Williams presses

# 'Zionist' groups outlawed as anti-Jewish trend grows

· 在在一个方面的基本的基本的。

tertiary case

by Patricia Santinelli
Terriary colleges were one effective response to the necossity to examine present sixth form provision which the prajected decline in the number of 16 to 18-year-olds had required, Mrs Williams, Secrotary of Sauce for Education, said last needs at Leigh College, Wigan.

"In the sixth form college or terriary college, with an average of oper-400 pupils, it is possible to offer 20 or more A-level subjects economically, einca tenching groups will be of a reosonable size", she said.

She added that the tertiary college, as as had, then advantage chart seadound and part-time, could consess full-time, and part-time, could consess full-time and part-time, could consess full-time and part-time, could consess full-time, and part-time, could consess full-time and part-time, cou



from Michael Bingon

WASHINGTON An Investigation has started to try An investigation has started to try to find our why relations between the US Government and higher education are so bail. The Alfred P. Sloan Foundation has allocated \$2.5m to set up a high-level commission to "find poths to a more productive and less conflict-ploqued relotionship" between the two.

relationship between the two.

The commission will be choired by Mr Louis Cabot, a member of the Massochusetts Institute of Technology Commission. The director of the orosearch will be Dr Carl Knysen, professor of nolitics economy at MIT. Dr Kaysen was director of the institute for Advanced Study for 10 years after serving in the White House under President Kennedy.

Outlining the work of the com-Outhoing the work of the com-mission. Mr Cabot said serious con-filet bad prised in recent years hetween the Feders! Government and broad segments of higher edu-cation over the subject of regula-tion. Presidents of leading research universities, public and private, and those of small libers! arts colleges expressed the same grievances.

residents b.

Arsities, public and a seed of small liberal arts eacheres are of small liberal arts eacheres are not at issue. They are endorsed no less broadly winhin higher education than within American society at large. But colleges and universities foar that the regulatory process track will have, as an unincended avoidable by-product, the eroman autonomy and of ocadenic free was \$12,600m. Of this science and learning, and \$8,200m was sudem oid, a large purn of which went to veterans.

Federal support has also shifts the compliance of the support has also shifts to scientific no period it was averaged.

For their port, Mr Cabot said, logislatora said officials at both Federal and State level found it hard to comprehend the lack of understanding by academic administrators and faculties at the never sity for occountability by those who receive public money to those receive public money to those responsible for authorizing it and overseeing its expenditure. To holp the commission, 22 support

colleges and universities, representing the range of institutions in Ambaira, are mow combacting studies of the mays in which they

ing thuse who go to two-year community colleges). About 25 years oga half the About 25 years ogn half the students were in prirate colleges and universities; now State instinctions account for more than three-querters of the student body. The rule of State finance has grown correspondingly; total State expenditures for higher education were unly \$492m in 1951 and \$10,900m in 1975.

ingly deroted to scientific and where research. In the past Itt rears there has been no real growth in the suppart of research-the figure, cor bot out grown. But student add, which was smoll at its beginning, has now risen to the point where it is nearly twice os large as research

# Study urges harder line on Soviet academic exchanges

The Suviet-Americae exchange properties is "seriously flawed", with macceptoble restrictions placed an Americans studying in the Soviet Union, says a new study. The American Government should toke a much tougher line in fighting Soviet violations of the spirit and purposes of culturel oxchanges, and should even consider sending back Soviet scholars in retaliction.

The suidy, by a New York research foundation called the Twestileth Century Fund, paints a gloomy picture of Soviet-American exchanges it says the Marsian exchanges. It says the Marsian exchanges it says the place of them and the programmes since they hegan 20 yeors upo. The result is thun that much has been expected of them, and the henefits have heen weighted very much in favour of the Russians.

The report helleves Saviet-American can exchanges are valuable and the Carter administration in the light of them.

search foundation called the Tweathers foundation called the Tweathers for foundation called the Tweathers for foundation called the Tweathers for foundations a gloomy picture of Soviet-American exchanges. It is a says the Russians hove consistently denied American researchers proper access to libraries and nychives, have forced them turn indulge in "hypocrisy and subterfuge" in order to gain ontry to the country and have placed maccepatable pulitical limitations on Soviet artists and scholars travelling such as Americans; but Americans

1

Ç

The report says the United States should no longor passively ringe of aroas the Russians regard accept. Soviet limitedore, one of prolifically sensitive and properties, cultural piterings of transportations, cultural law for a properties of the first properties of transportations of transportations, present areas, year—was now introduced the first properties of the cultural acceptance of the cult

Stores of Americans; but Americans

# West Point under fire

West Point and a pervasive lack of the state of the state

Colleges face autumn of unrest by Günther Kloss

West Germany

The predicted "hot autumn" it West Germany's universities and colleges is now almost certain. A three-day extruordinary meeting of the Vereinigie Dentsche Studenten-schuften (VDS) (the West German National Union of Students) has decided to call for a notionwide 14-day hoveour of lectures begin-ning on November 28

14-day hoveour of lectures beginning on November 28,
The virike is to culminate in a
"day of solidarity" which will
coincide with the third and final
reading of the Boden-Witttamberg
university law. The only question
is how far West Germany's 844 km
standards will follow the strike call
from the left-dominated VDS which
hus been apposed by the Christian

shor far West German, as hor far west of the control of the left-diministed VDS which has been apposed by the Christian Democrat Sindents' Association.

Mr Pringle, furmer deputy control of The Observer and former editor of The Observer and former editor of The Spharp Morning Heroid, which even the recent grant has west as hardly offered most their role of indversities, and to evaluate how the universities had coped with the almost unfellered postrum expansion in tertiary education.

Some urbability the broadest versity's role, Mr Pringle former deputy control of The Observer and former editor age sindents are very sage in teach, they are decided to role of indversities, and to evaluate their paints are very sage in teach, they are decided to role of indversities, and to evaluate their paints are very sage in teach, they are decided to role of indversities, and to evaluate their paints are very sage in teach, they are decided to role of indversities, and to evaluate their paints are very sage industrial and they want to reach, they are decided to role of indversities, and to evaluate their paints are very sage similarity and they want to reach, they are decided to role of indversities, and to evaluate their paints are very sage similarity and they are decided to role of indversities and to reach, they are decided to role of indversities and to reach, they are decided to role of indversities and to reach they are t

profest is more immediately palitically mativated. It is concerned with the adapts don of many of the existing Land university laws to the Federal Hockschulroh. pansion in tertiary education.

It was probably the brondest appraisal of academic aphaion in Australia in many years. The unly two paints on which there was almost manumous agreement were that the universities are going through o profoundly critical and mistable phase; and that the best remedy would be to take in fewer students—and take them older.

Tertiary education in Australia —the first year of comparable figures—Federal funds for colleges and universities totalled roughly \$250m. In addition there was a small Federal contribution in sun logislation to have been designed thengesetz General Framework Law for Universities) which is now under wny everywhere. The mistable phase; and that the best remedy would be to take in fewer similarity and make them older.
Tertimy education in Australia this financial year will cost A\$1,200m (1759.5m) to run, or A\$150 from each taxpoyer. Government living albewages, provided by both mujur political parties since the war to encourage runna negation.

Charlesworth, an egalistic eargies that terdary education argues that terdary education and the state of the sound that the expansion of the control of the visions of this compromise Pederal logislation to have been designed to early their freedom and the influence of the student pryaniza-

rlons. For example, many Lönder Gov for example, many Lönder Governments now propose to dissulve independent student inflons. The student gramps of all political persuasions opposed this move. But, whereas the more moderate associations, like the RCDS, the conservative students association, merely asked to be ollowed to retain the right of the student bodies to promotice an matters directly affects.

asked to be ollowed to retain the right of the student bodies to promine an matters directly affecting them, the more bett-wing a gamizations are demanding a goneral onlitivol mondate.

Similarly, all grupps oppose the envisaged new disciplinary proceedings. The left-wing students, however, interpret this move as primarily politically inspired and link in with the whilely practised and the with the whilely practised and rounterersial service posts by the Sinte.

Similarly politically inspired and link in with the whilely practised and rounterersial service posts by the Sinte.

Similarly politically inspired and link in with the whilely practised in professorlate o many prominent rule in decision-making processes at departmental, faculty and university level. Yet only the mare extreming groups still insist un the Drittel-partier, the equal distribution of vating rights between the three major groups in the university—teachers, similarly and other staff.

There is resistence by the study for each course, which they see as intruducing o school-like atmosphere into the university's acodemic community. Here their protest runa counter to the wishes of study for each course, which they see as intruducing o school-like atmosphere into the university's acodemic community. Here their protest runa counter to the wishes of shoet ens of thousand applicants who here had to be refused admission because of the shurtage of student places.

However, more rigid time limits would mean real hurdship far those common use from over 7.000 in not much more than 3,000. Though this might seem only communeense to Westerners, it inreduces retry complex problems for the Chinese, and may well be a misgnifed more which will only increase the language.

The idea behind the proposed reform is to start using exactly the same symbols or specific word in the same way but hove totolly all forent measures of characters, it makes the word "hu" for insulational without it measures of characters, it makes the word "hu" for insulational without its specific word in exactly the same symbols or specific words in the Chinese which ore pronounced in the same way but hove totolly all forent meenings, even efter iona

stodent places,
llowever, more rigid time limits
would mean real hurdship fur those
undergraduotes who have to work
even in term time in order to be
able to continue with their studies.
Also a regulated length of study Also a regulated length of study presupposes thorough course reform, and this has herdly been undertaken onywhere yet.

New Zenland

beinges that have proved unpro- confusing but an belance was believed in them a single agoncy such as the says there has been no proper British Council.

University ills: 'th

# Leicester plumbs violent secrets of outer space

by Clire Cookson

THE TIMES HIGHER EDUCATION SUPPLIMENT 20

MELHOURNE sunds of runing people to miversity ill-equipped for intelligence and state the tradition of the world with the world with sound it.

takes have recently continuation up to the former to the former with up to former wi

formed with up in for the success rate of undergrader, vante direct from school rathe speakers on Auc grad Professor Geoffroy Bong fessor of history at Maddirers on Western Aug example, said: "Universe tion is too good simply at fined to the years 17-21 but age similants are very the inteach, they are decket, I now what they want.

On the wider question of ... Versity's role, Mr Pringle as answers from two gradenics of extremely opposite riems Proliferon 11. A. Wolfsohn, an eliustal helieres standards have falles lecture for many strategic likes le

cause ron many students has be admitted, and Professe of Charlesworth, an egalization of

was not little democratization

has been taken hao accom

is somewhat like suggesting has breath the words to "for and "too" should all be specially and "too" should all be specially whose language court relatively few homophones, who altotand in Chinese.

In Chinese script, hemophen are differentiated by semante of market which define their meaning very roughly-for instance, by indicating whether he plant.

students to blame

the war to encourage roung people in go to university, cost another AS2000n it year.

Yet there is the disconcerning fact that decided to the cost of the cost of

that about 10,000 university gradu-stes are correctly memployed in tirally irreststible, at the

Anstralla, while perhaps another in Anstralla, while perhaps another ill.000 have not gut jubs in their chosen professions. The nulversities themselves admit that they are producing more teachers, doctors, five section of philosophy and dox 45 yers, architects and engineers than are needed.

Have the universities therefore versities that they had been

failed, and have they has sight of ably conformist and had mand their own feurilous?

New move to reform script

HONGKONG

their user fearthers?

Mr. Pringle Idames Australian success.

Linguists and psychologists in Peking are planning a further drastic more in the compulgation simplify the complex Chinese script, but foreign linguists and mony Chinese both inside and outside the mainland have grave inligivings about it.

The latest plan Is to cut the number of Chinese characters in folly common use from over 7,000 to not much more than 3,000. Though this might seem

The higgest problem faring Austra-

lian universities is the students themselves : they are tun young, had

lazy, they lack a respect for misdom, they do not understand the tradi-

ional purpose of universities, and

This, at least, is the conclusion of

n mojar survey of Australian ter-tiary education carried out recently by a leading sucial vritiv, John

they must in change the world with-

nut trying to undersmud it.

science currespondent Leicester University's X-ray astro-nomy group will shortly be publish-ing a new and "deep" survey of extragalactic X-ray sunrees, which appear to include some of the most violem objects in the universo.

discovery that Seyfert galaxies are strong X-ray emilters and therefore oven more powerful onergy sources than had previously been realized, was one of the most interesting results of the survey.

Early discussion of the results favours the theory that these X-ray galaxies, some of which are more than 1,000 million light years from Earth, ore powered by an extremely massive collapsed object—probably

science currespondent
Leicester University's X-ray astronomy grown will shortly be published now grown will shortly be published in the most violen objects in the universe.

The survey is based un observations from the Earth's surface scope on board the United Kingdom satellite Ariol V, launched in October 1974. Detectors cannot work on the Earth's surface because the amosphere absorber of the sky hecomes clearer with each orbit of Ariol V, as the expesure attention for siellar mass, neutron siar or which it emiss X-rays.

The X-ray picture of the sky hecomes clearer with each orbit of Ariol V, as the expessure attention for the increases. The Leicester catalogno, be published in the "Monthly Nutices" of the Royal Astronomical Society, includes almost 100 X-ray sources outside our own Milky Way galaxy, detected over the satellite's first 10,000 orbits. The elecsted over the satellite's first 10,000 orbits. The relevance is due to keep operating until at least orbit 20,000, by which observations from glant ground-based optical telescopes, in particular the naw 3.9 metre Auglo-Austrolian tiescope in New South Wales, spiral stor systems with extremoly beight nucloi emitting tremendous quantifies of radiation.

Professor Kon Pounds, director of tha Leicester group, thungin the discovery that Seyfert galaxies me stone mere strong Kray emitters and therefore oven more powerful onergy sources than had previously been realized, to the worth £2m, on the American spacetost than had previously been realized as a first part of the world.

It will be directed at cloude of the course of the course of the course of the new county of the course of the course of the object of the course of the powerful or course of the powerful or course with extremoly being the course with ex

# Ways of saving the parrot

Three students from North East London Polytacianio hove returned from a month-long expedition to the Caribbean falsed of Salut Lucia with a set of recommendations for saving the Saint Lucia parrot, one of the world's rarest birds, now threatened with extinction.

The atudents, who ware accompanied by an artist, explored the transmissions of the island which have become a refuge for the parot. In the course of the mounth the team made 140 sightings, and ordinate that the remaining population of perrots may have dwindled to as few as 100.

yollow thill—the parret is a nopular net and is often captured for sala to visiting Americans. One of the team's moin recommandations to the Soint Lucian government will be that the proventions. that it berrows the parrots kept os pots by the Islanders and tries to breed thom.

Other recommendations include

# Don's diary

# China then and

a black hole containing material from 10 million or more stars. It sucks in whole stars and as they are Ifnw can I hest entertain you? By talking about my hilarious seminar last year on political violence, with a red halred Maoist glrl, a black-

sitting comfortably? Thon we'll begin.

I was in Chinto before die foll of Teng Hsina-l'ing in 1976 so, perhaps parudaxienlly, Chinese uttitudos at that time ware probably closer to those of today, now that he is reinstated, than to those of the intervening yeor. Certohily Ching Chung Chung Chinu-Chiau (of the Gang of Four) wos writing freely and was regarded os a leading theorist. One was conscious, boyaver, of the clash between what I would describe as "Puritions" and "Pragmotiste" ruther thon left and right.

When I was teacling in 1974, thoy sold: "Tell us obout the sino-Soviet split", I sold "Yon must be joking. You tell mo." One of the three girl students fixed me with a sweet but firm smile and said "You talk—we listan". So I did, but as an international relations don when I did go to Cline itself I was particularly keen to learn obout their attitude to the learn obout their attitude to the learn obout their attitude to the learn obout their and prospects for stability only prosperly. I found them refreshingly rendy to discuss and, indeed, to argua about bolb.

At no time did I pretend to be another Ittheran Morxist don. I

At no time did I pretend to be mother liberant Morxist don. I another inherent Morxist don. I went in—and ceme out—as a convinced plurolist, onxions to learn about China. I was not so lilmannered to suggest (nor do I bellove) that our porliamentary system would be better for them any more than any Citiaese ever suggested to ma that Maoism would be better for us.

### The Russians

hetween the two taking place in Europe—pussibly utilitorily ur pos-sibly just pulitico-economically. They see the Russians winning, with the Americans abandoning Nam in disillusion and the Western Euro-pean countries accepting the inevitshie, to become a gaggle of Czecho-slovakias. Freed of any challenge to the West, the Russinas will then turn on Chiau.

For this reason the Chinese are For this reason the Chinese are very auxious for a strong working relationship with the EEC, and in particular with those pollucal forces in the West European countries which are likeliost to resist the Moscow-ollgned Communist Parties. I quickly learnt in Chine that if there was one inbel more defamiliary than "imperialisr" or "fascist" it was "Moscow-aligned Communist".

tion turning out torch batteries. The brigadier's wife came off the assembly line to show me round, and give me s corton of batteries which hight my way to this day. (Brigadiers' wives from Alderehot will be reading no farther.)

But for me the highlight of the day was the meeting of the political committee of the compony which had demonstrated for me all day. This was composed of all canks (actually the Chinese army has no ranks but there is no problem as officere have four pockets and soldiers have four pockets. The discussion was led by the political officer—a most impressive man of about 30—who set out for me very articulately why it was so imperiant for China and the EEC to cooperate. I responded from the heart. This was well received and the PO made a second appeach asking me how I as we the Soviet Union's threat to Britain. I told him, and he made a third speech, to which I also replied and we parted in warm accord. Moscow-eligated Communiats beware i



# Dons labour, too

This same theme took ap some part of another highlight of my visit which was at Chang Chan University in Comon. Here I was met by tour professors tof history, philosophy, mathematics and theoretical studies; who could have held their own among any, be they or Harvard or All Souls.

As a time for admissions I was

As a tutor for admissions I was respecially interested in their selecport ployed by the candidate's performs need by the candidate's performs need in the ship floor or in the fields. Nu one qualifies for university until he has done or least two years work in a factory or o commone. I wish we did the same.

But the most foscinating part of our discussion was about the history of revolutions. The Chinese have

of revolutions. The Chloses have a trevientions feel for history, and this was why—when they had asked me in advance what I would like to disenss—I had picked this subject. Could they say, I had asked, why the French and Russian Revolutions had departed so for from the aims of their initiators, why they had become "acciol foscists", and why the Chinese revolution would not go the same way?

The professors of history and philosophy wure quite clear about this. In both France and Russia the revolutionary parties had fallen into the hands of "had men" who had used them to consolidate their own positions; but, more importantly, they had falled to re-educate their own people and to educate the mew generations from corliest childhood, to remove all vestiges of bourgeeds ideas and aspirations, of greed and ambition, of interest in their own security and a deaire to give their own children a good sinrt,

### Give me a child ...

This answer was fully fo eccord with what I had seen during the previous week, eround the factories, the villages, the trousing estates, the schools and the kindergartens. Whon a mother hos a baby, sha has 56 days' metornity leave. Thoreafter she returns to the factory or the fields and the baby spends most of every working day in the creche (two muchs to three years) and then the kindergarten (3 to 6) and the schools.

the schools.

They make no secret of the olin-which is to change the nature and outlook of the child, even further hian the Jesuits do ("Give me a child for the first seven years, and you may do what you like with him efterwards"). They regard this ae fundamental because on oos who has not been through this process will have the "correct" attitude, So their revolution will take 50 years—till 1999—before it is completed. They are just over helf-way, Until the top managers and officials at 50 are people who themselves grow up as babies under the party, the revolution will not be secure.

But, I asked the professors, will not man turn again to sin? Will not help to their own childs for harder work? For the chance to do their best for their own childs for harder work? For the chance to do their best for their own childs for power and influence? Is not this human nature? And can you hope to change lruman nature in 50 years?

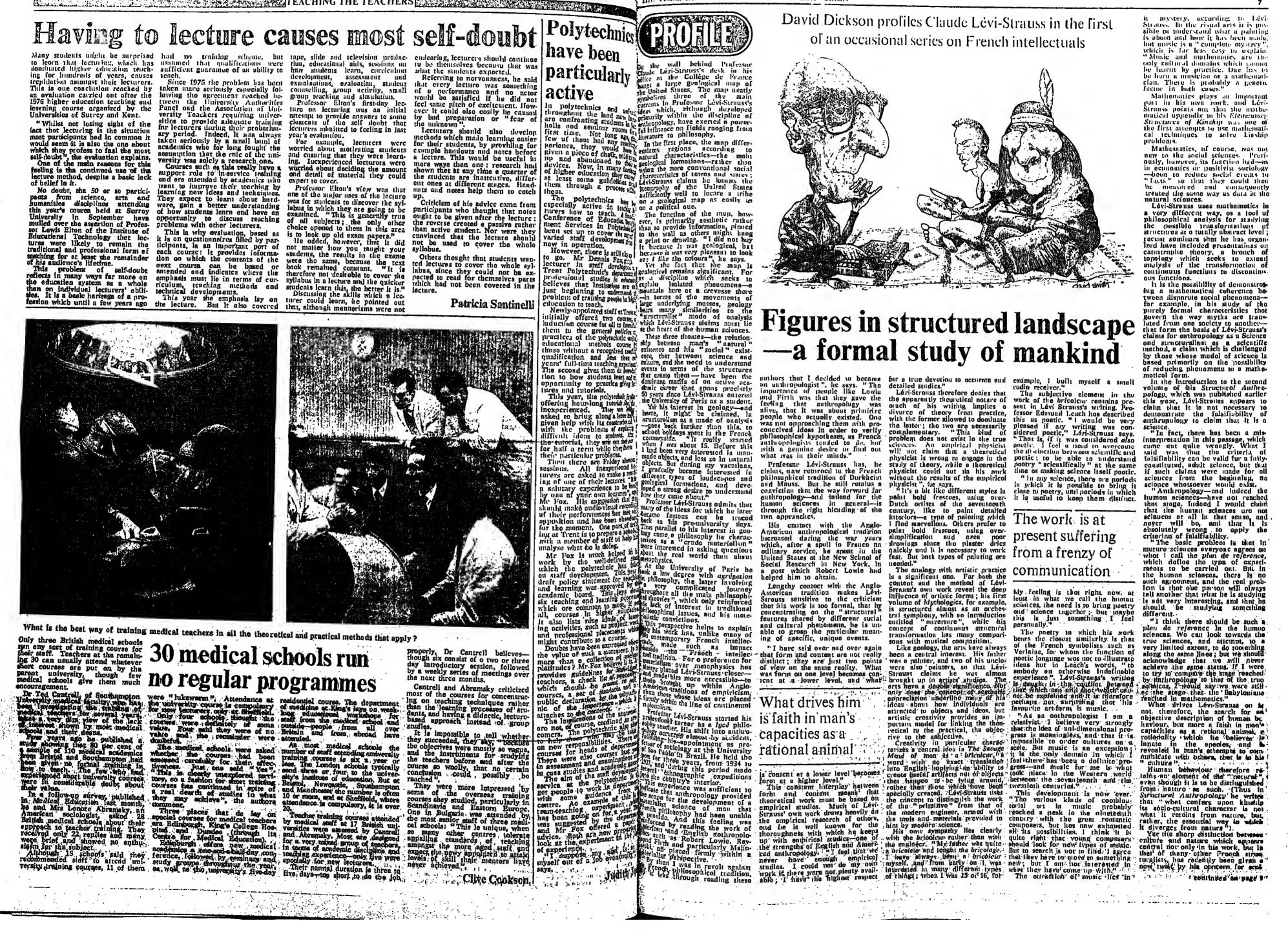
"We doo't know", said the professors, with great earnestness. "No one has ever succeeded before, which is why no revolution has ever survived. If we fail our revolution has ever survived. If we fail our revolution has ever survived. If we fail our revolution for wholever, depends first on his political attitude". Skill, ability, experience—all these are seconiary. Abour this they make no bones. They make no secret of the olu-

# Having to lecture causes most self-doubt have been





David Dickson profiles Claude Lèvi-Strauss in the first of an occasional series on French intellectuals



in mystery, according to Lévi-Stranss. In the risual arts it is pro-sible to understand what a painting is about and how it has been made, but attoic is a "complete mystrey", which is far less easy to explain. "Music and available is a to the

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# the Chairs to the

Or Derrick Chisholm, senfor legarer in oral medicine and pathology at Glos-gow University, has been appointed to the Boyd chair of dental surgery at the University of Dandee. Dr. tvor Ralph Richards, lecturer in

pharmacology and therapeutics, Univer-sity of Leicester and consultant physi-cian Leicester Area Health Authority has been appointed to the chair of medicine at the University of Rhoolesia from January 15.

#### Forthcoming eyents

A seminar on the evaluation of the new BEd, organized by the Society for Research into Higher Education, is to be held on October 22, at the Conneil for National Academic Aranda, 344-354 Graya Ina Road, London W.C.1. Fee: £5 plus 40p VAT [Members]. First for information from Kerren Simmonds, Guildford 11483) 39003.

"Ifunian control of economic and other complex systems" is a lecture organized by the London School of Economics and Pollitical Science to be giren on October 27 by Dc Donold Broadbent, of the department of experimental psychology, University of Oxford, It will be chalred by Professor Hilde Himmelweit, of London University, Admission free.

A conference on oral history and the Great War, organized by the Oral filstory Society, is to be held on October 29 at the London Schont of Economics and Political Science, Houghton Street, WC2. Fee: ft. Further information from Ann Summers, 1 Rose Lane, Oxford OXt 4DT. Telephone (068)

The Institute of Personnel Management national conference is to be beld on October 27/28 at Harrogute. Speakers will include The Rt Hon Joel Barnett MP, Alan Fisher, Lord McCorthy, Jim Mortimer, The Rt Hon James Prior MP, Arthur Scanglit, The Rt Hon David Steel MP, Topics loclude: incomes policy and the next wageround; the cose for free collective bargaining; industrial democracy post fullock; the developing tole of ACAS. Fees for full conference (89.64 (All-time students and rathred members). F199.08 (Non-members). E12.96 (All-time students and rathred members). Further information from Peter Clarke: telephone 01-387 2844, ext. 34.

"Narrative and representation lufemiolsi film practice," a film day schoot, is to be field at Goldsmittis' College, London, October 29, 1977. Tickets 50p; 25p for pensioners, full-time students and achook-lifteren. It will include the screening of Lines of Perforagers (1972) directed by Yvonic Raince.

"Cidiure and Revolution", a one-play conference organized by the Arts and Leisure Committee of the Communist Party of Great Britain, will be held tomorrow at South Bank Polytechnir Sindents Union, Rotary Street, London Stot. Sessions include "the revolutionary party" and "Culture, cultural workers and socialism". Authrission free.

Noticeboard is compiled by Patricia Santinelli and Mila Goldie



Wolsey Hall, the prily correspondence college with full contrace for London Daliversity Enternal BA degrees provides individual instruction by beging qualified theory. Wolsey Hall has a commitable second of success a prus rate of over 90% is including a prus rate of over 90% is including a lusty proportion of the 1st and upper 2nd class handurg availated. Courses cover BA. In Gree Subject, B.Sc. 4. In June 1. In June 1. B.Sc. Econ, L.B., B.D., London University Distorns and Postgraduate Core, in Pateauling, College of Freceptura Diplomus; as well at a width trues of professionals, career and G.C.E. Subjects.

Free prospecius from the Principal

W M M Milligan MBE, TD, MA.

Dept BAI, Wolvy Hall,
Oxford OX2 6PR,

Tolephane (8865) 54231

(Ausafono after 4:45, p.m.)

Wolsey Hall ONIGRD

# A dippointments

Universities

Dublin Research fetlow: Austin Currie (faculty of economics and social studies).

York
Readers: C. Sawyer, P. Statoons (economics and related studies). Lecturers: D. B. Roger, P. G. Thompson (psychobagy); A. J. Fowles (steelad adolinistration), R. A. Franklin, D. Hay (politics, tempormy), P. G. Alkinson (mathematics), temporory). Research (eliows: P. R. Davis, A. R. Hall, Sylvia Hogarth (blology); E. E. Ernstein miner, S. C. Rogers (chemistry); M. Lodvigsen turaliematics); T. V. Allos, A. Hennjel, A. R. L. Tantall (physics); I. D. Cole (social administration und social work); I. C. Bristaw, S. Harris (institute of Adranced Architectural Smilles); S. A. Boker (Institute of Social and Economic Research); W. G. Clarence-Smith (Centre for Southern African Studies). Research assistants: Christinc Pickering, M. Dixon (biology, temporary); Jane Weale (social administration) and social work). Tuttur: Margares O'Connell [urt].

#### Grants ...

Edinburght

Mechanical engineering—276,000 (sup-olementary) from the Department of Energy for a study of mechanism for plementary) from the Department of Energy for a study of mechalism for extracting power from sea waves, under the direction of Mr S. tl. Salter, Genetics—£19,570 from the MRC for research on mouse mutants aftecting metalcolism and development under the direction of Dr. 11. Kaeser.

Tropical velerinary medicine—£98,773 in support of a project on "thelieriosis research" under the direction of Professor Sir Alexander Rubertson; £36,671 in support of research to ascertain the effect of place mutrition and environmental temperature on the work oniput of drought caule, under the direction of Professor Sir Alexander Robertson. All grants from the Ministry of Overseas Derelopment.

Chemistry—£18,850 from the SRC in support of research on the directional formal the support of research on the determination of molecular structures in the gas place by electron diffraction under the direction of Da. D. W. Har Mankin.

Heriot-Wett Building—£33,550 from the SRC for a stody of variations in the thermal trensmission rules of building components under the direction of Professor V. R. Torrance and Mr R. A. Mutch.

Economics—£33,713 from the Department of Education and Science for evaluation of alternative teaching techniques and materials for beginning economics courses, under the direction of Professor K. G. Lumsilen.

Chewistry—124,895 from the MRC for research, respectively into the displacement of titrated drugs by exogenous agents and toto energy transfer luminioussy methods mider Dr J. N. Miller.

Portugal's other revolution

by Ben Pimlott

British media coverage of the 1974-75 Portuguese revolution warmable mainly for its shalbowness. untly a deep reflectance to break away from cold war stereotypes the impression generally conveyed ras of a classic battle between "plurallst donneracy"—personified by Socialist Party leader Murio Sources—and the sinister, Communist-led forces of "left-wing dictator intent on a new repression. What was seldom presented was

he exicat to which parties and tendencies were far less important than a remarkably reliespread movement of ordinary people taking power for themselves. As relevision was one of the prime distorters, it is particularly satisfying in find the Open University have rethressed the balance with two programmes on "Education in Portugal", forming part of the Schooling and Society course, the second of which was liowii lasi woek.

Education was one sphere Portugal where the rigidity, authoriorlanism and sheer neglect of the nucten regime was especially pal-pable: and where the reaction, after the April 25, 1974 corp, was must dramatic. Indeed, if the Portuguese upheaval ran be chnracterized as a "revolution from , then tenchers, students and even high school pupils were firmly unong the vanguard.

In these programmes—more about immivation and change than about the pattern of Portuguese education as a whole—Ed Milner nul lifs team bok ut what has happened in curriculu, classroom methods, leocher truining and school administration since the political incricanc, by talking in teachers and pupils themselves. Apart from a snatch of conversation with the met-very-illuminating Minister of Education, Sottomayor Cartilla, they have stay and the met-very-illuminating for the cartilla, they have stay and the stay of the cartilla, they have stay and the stay of the cartilla, they have stay and the stay of the cartilla, they have stay and the stay of the cartilla they have stay and the stay of the cartilla they have stay and the stay of the cartilla they have stay and the stay of the cartilla they have stay and the stay of the cartilla they have stay and the cartilla the stay of the cartilla the stay of the cartilla the stay of the cartilla the cartill ardia, they have steered clear of politicians and boreamerats, and stuck to practitioners and consu-

What is very striking and well between the distribution of the contrast between the old and the new, and the realization of a need, in a society where menty 40 per cent are illiterate, to make up for inst time. There is teenage Antonia, in her last year in high schimb, giving solemn reading lessons to group of peasants two or three times her age. Annung her pupils, straighing hard to peak the programmes that the programmes that the facility of a faithful Rhyddis for the extreme and absolute regime. 1850 at also related to its possess it to the same thing as destroying all latter programmes the fact the same thing as destroying all indicated to its possess in the tothe same thing as destroying all indicated to its possess in the trained to its possess in the same thing as destroying all indicated to its possess in the trained to its possess



25, in some villages the only scople dence and opportunity of chin could learn how to read were the sons of the rich, because the poor were told that there wasn't saw room for them in the schools. I was obveys very sorry I enabled read opportunity I tack it."

dence and opportunity in portunity the result of the past three distributions in the past three distributions in the schools. I was obveys very sorry I enabled this apportunity I tack it."

Since these programs we alternative approache to the

How to cope with this burklog of ignorance and educational failure? thre way is to relate teaching and learning to the everyday lives of each community. We see film of the artlerly occupation of a farm in the sambern province of Alentein—one example of many—and then hear the teacher who has been elected president of the heat school: "I think it's essential since April 25 to integrate the curriculum with the productive activities. him with the productive activities of the region." To illustrate the point there is a girl pupil who has been picking lemans and who says "everything we grow here goes to the school canteen and we eat it." "everything we grow here goes to the school canteen and we eat it".

of anything, except of the producer's awa sympathies, which are clearly on the side of the more classed teaching methods, improved communication between stuff and position is a bit crude. In position is a bit crude. In the communication of the content of the co pupils, and attempts to break about composers and tradition. Composers on anachronistic regime. Is

times her age. Among her pupils, straining hard or rend the characters on the blackboard of the characters on the blackboard for characters of the brogrammes that (while ters on the blackhourd, are her own patents. What the DD team does do superbly Another middle-aged student in is to capture an atmosphere—the the group comments: "Hefore April sense of excitement and imbepen-

leges in the past three the years and which sure it is though the revolution is taken consion.

Since these programmes are a about the notional (United Kingdom) position is published (University Graduates 1976. Some Details alternative approaches to the internative approaches to the constitution of First Destination and Employment, they might have tried to explain why it was that test and students, brought up this could restrictive system, should be a seed by different means—such are the vogurles of the binary system—but romoton in presentation

The background booklet

Of course, none of this is evidence. We are then show it courses none of the proflagsthing, except of the proheer's new common of the pro-This " he fore and aler" is:

presition is a bit crude. has collectional inadequacies? an anachronistic regime. In the

Administration of the Market of the control of the

THE TIMES INTEREDUCATION SUPPLEMENT 21.10.77

gal Kirkman discusses

the background to this

week's publication of

statistics on graduate

A colleague who joined my department at the beginning of the year remarked after he had been with us for two weeks that he thought we were all obsessed with statistics. It was a foir comment from sayone observing our activities at that particular time.

This Is because the first Iwo or

This is because the third two or three weeks of January are the period when the final details ere assembled and prepared for the satural return of statistical information about the lirst destinoulung of the previous year's gruduates. The figures from all the universities are despatched for processing

ties are despatched for processing by the Universities Statistical Re-cord in Chehenham.

eniployment

For many years much follogative statistical information about university output has been published, later, by the University Grams Committee. This year for the first time the full information uppears as a supplement to the summary as a supplement to the summary details. They will be published like the summary, by the Central Services Unit for Cureers Services, with the sponsorship of the

Statisties do not usually provoke great excitement, and it may be asked why the arrangements for

The statistics are subjected to dotalled analysis, and to broad brush treotment. Carcers advisors

Plotting the destination of students by numbers

three short weeks, the coreers advisers who collect and code the information appear to be obsessed with it. And this year's change in the method of publication makes it timely to look briefly at the development of selections. opment of what is now a promi-nent feature of the higher education

to 1955-the year in which I graduated-there were no national

higher education coreers advisers.)

Monthers of Parliament ask spessor overlaid and, by some people, for tions in the House about them, and gotten.

Throughout the whole period. however, university careers advisers have controlled the pattern of the return Changes in the pattern of graduate employment have so far as junsible been reflected and the soin has always been to provide contprehensive information which comprise simple to each and the comprehensive information which remains simple to code, and to ensure comparability from year to

haw a requirement on universities by the University Grants Committee great excitement, and it may be asked why the arrangements for publishing the annual employment balance-sheer of higher education simuly be thought worthy of comment. Fifteen years ngn, ourst careers advisers would probably have agreed that the atatistical details were nf purely dimestic contents, but this is certainly no longer true.

Every year, the facts about first destinations of graduates are widely reported and discussed in the newspapers and obsewhere. Interpretations (and frequently misinterpretations) are made. Conclusions are drawn about the needs of industry. The value of universities, the attitudes of the young.

The statistics are subjected to dotabled analysis, and to broad brush treatment for education and publish treatment for education corrects advisers. In the United Kingdom, (From the preparation and publish treatment for education corrects advisers.)

Such, in oudline, is the bock-ground to the doctaion taken earlier in the year to publish the full attaitation details brush treotment. Carcers advisors use them to correct misappreliconsions about whot clossicists, or chemists, or cotering graduates, actually do. They employ them—cautiously—to assess trends and fashions in demand and supply.

From the early 1960s the "first destination" and "type of booklet. The summary brokket. The summary brokket. The summary brokket. The summary brokket is a child of only four brokket itself is a child of only four published, and official and public interest in it increased long ago to cautiously—to assess trends and fashions in demand and supply.

From the early 1960s the "first destination" and "type of brokket itself is a child of only four years, having been conceived by the AGCAS statistics sub-committee as a supplement to brokket itself is a child of only four years, having been conceived by the AGCAS statistics sub-committee as a supplement to brokket itself is a child of only four years, having been conceived by the actually do. They employ them—the control of the summary brokket. The summary brokket is a child of only four years, having been conceived by the actually do. They employ them—the control of the summary brokket. The summary brokket is a child of only four years, having been conceived by the actually do. They employ them—the control of the summary brokket. The summary brokket is a child of only four years, having been conceived by the actually do. They employ them—the control of the summary brokket is a child of only four years, having been conceived by the actually do. They employ them—the control of the summary brokket. The summary brokket is a child of only four years, having been conceived by the actually do. They employ them—the control of the summary brokket is a child of the summary brokket. The summary brokket is a child of the summary brokket. The summary brokket is a child of the summary brokket is a child of the summary brokket is a child of the summary brokket

appearing later and later each year.
This year's decising followed a recommendation of a working group formed jointly in 1975 by the UGC

and the Committee of Vice-Chancel-lors and Principals, under the chairmanship of Dr S. L. Hrngg, the vice-chancellor of Brunel University and chairman of the Central Ser-vices Unit Management Committee. The working group included repre-sentatives of the university and polytochale carrows sorvices the polytechnic careers services, the CSU, the USR, the DES and the Department of Employment.

With the change, the opportunity

With the change, the opportunity has been taken to cover in the defilled tables the output of all United Kingdom universities—and just those in Great Britahi—and also to include, in addition to the "type of employer" information, details of type of work which hitherto boya been available only in the summory booklet or (by special request) in computer printout form.

out form.

The whole exercise is very different from its origins in the late 1950s. It still attracts, however, the enthusiasite end experienced attention of careers advisers, who feci a peraonai commitment, as well an recognizing public accountability. And they still achlove a return of some 80 per cent or more; there are few major, regular, national annual surveys of which thet could be claimed.

# Structured landscape

ogical issues, and for the need to doine the "rights of man"—in evidence to a French Parliamentary commission now studying this topic
—In terms of man's rights as one
of a rariety of natural species.

"The eradication of one numeral species, whichever it is, through the activities of man would unument would not go quite to the extreme of a faithful Bluddist and refrala from killing o mosinilin; but at present we are leaning too far in the other direction, and it would be helpful to re-establish some type of balance.

Contarn for natural species

# The vibrant curiosity of a one-man renaissance

Ezrn Pound was concerned with a Ezrn Pound was concerned with a very large number of magazines, whether as contributor, adviser, promotor, encourager, "foreign correspondent", "fareign cultor", letterwiter, music critic, art critic, reviewer, evaluence grise or Just o blodgeoning, hammering conscience trying to alrive them in the directions that were vital to him. These directions were often also vital to the interests of many other calented writers of his time; have Fliot writers of his time: Inyce, Elint, Yeats, Heotingway, Wyndhum Lewis, and William Carlos Williams, in nume a few.

Gallup, in his bililiography, lists some 1890 contributions by Pound to periodicals, and this not com-

VORTEX. THE PRIMARY PIGMENT

Philip Grover reviews the exhibition Pound in the Mugazines at University College, London

Beaucoire, there are the grave models of excellent building.".

St Bertraud will be mentioned again in Canto LXXXII. In 1959, when he wants support for Sheri Martinelli, he will quote the assistance given by Sigismundo Malatesia to Piero della Francesca: Canto VIII written in the 1920s.

The best explications of Pound's The best explications of Pound's Comos are his other writings. This is brought out brillionally by a display libustrating the relationships between Canto XXXIIII, Pound's ordices in The New English Weekly, and those by C. H. Douglas in the same journol entitled "The New Economics and the Old Economics".

The display was designed by Szephen Feudor, who has been urging us for some time—rightly I believe—to move away from the doctaine of the poem being in the "words on the page" to seeing how nurch of the poem is in the words off the poge".

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# **Bogged-down Brookings**

sucked into the murky moross of social scleoce polltics way have been casy to anticipste. But this does not otean that the sad sequence of events in the apring and summer is less depressing.

and summer is less depressing.

It now seems unlikely that an institute on the lines of the Brookings Institution will ever be established in Britain. The hest that can be hoped for is some modest enhancement of policy studies within higher education and some, probably equally modest, redirection of priorities to favour independent policy institutes such as Political and Economic Planning [PEP] and the Centre for Studies in Social Policy (CSSP) which are now on the verge of imalganization.

Some will argue that rhis outcome merely reflects the profound differences between political culture in the United Stotes and in Britain. t does. But this broad conclusion ilso encourages complacency bernuse it absolves us from enquicitig

Three factors seem to have been particularly influential in bringing particularly influential in bringing about this unhappy sinte of affairs, first, the concept of policy studies rests on two poles: the Government and other agencies which octually make ond carry out policy, which provide the academic insights that fashion and correct its hroad direction. Yat the idea of a sroused no interest, let olone cucouragement, in Whitehall or the
town half, Thore has not been the
slightest suggestion that the preper relationship of trust between
Government and institute necessory

Second, the social sciences establishment began by recalving Professor Dabremieri's proposel with ill-judged bad grace and seemed to make an secret of their naive suspiciou that it was an attempt to aggrandize the requiation of the London School of Economics. When it became obvious that there was geowine interest in the idea of a British Brookings and that their suspicious about institutional aggrandizement were quite unjustified, they were forced to toke the proposal on board but did so reluctantly.

The all-too-famillar way in which the imaginative proposal for an institute of policy studies, a "British Brookings", has been licly the need for a greater investscience research Connect, in parti-cular, can perhaps be explained by the fact that to acknowledge pul-licly the need for a greater invest-ment in policy studies could be in-terpreted as an implicit admission that previous SSRC research initiathat previous SSRC research initia-tives had been something less than successful. That would not be an entirely untain conclusion to drow. In the admittedly difficult but fashianable game of patching re-search priorities to mathand needs the SSRC has perhaps been a less skilful player than the other re-search councils.

> Third, by the time all the sec-tional interests but had their say and all the special pleading had been heard the definition of policy studies, which in Professor Dahrendurf's originol proposal had been admirably clear, had become hope-lessly blurred. Some argued that the existing policy institutes, like PEP or CSSP, should not be Ignored; others that it would be wrong in the British context to have one mono-lithic Brookings with a too-cosy relithic Brookings with a too-cosy re-lationship with Gorenment. Sev-eral other arguments for going slow on the idea of n British Brookings twere put forward, individually many were sound and sensible; taken together their effect was tendentions and negative. The whole idea of policy studies has been wotered down until it means not much more than giving a greater priority to research in areas that seemed to research in areas that seemed to have the most direct implications for social policy. In other words on new package rather than a new

in his original proposal for British Brookings Professor Dahren dorf suggested that one of the tasks of such an institute might be in try to define the task of the ta obly provoked a chauvinist response Yet the whole policy studies episode irself is a fine demonstration of many of the things that ere mong, the arrhives of ideas and the immefillity of Institutions that underplant

There is perhaps still time for o more positive approach to be adopted to the question of policy studies. A lot is at stake. Continuing delay and failure would east doubt on the efficacy of our present arganization of research in the social sciences. More important than that the follure to establish a

# Wider brief for SRC?

In 1972 the Government defined the purpose of research funded from its science budget as "to develop the damental capacity for research and to support higher education. It said the primary aim of the Science

to support higher education." It said the primary aim of the Science Research Council should be to assess research Council should be "to sustain the standards of education and research in the universities."

Since these, company, resistions and amount of the standards of education and research in the universities."

Since these, company, resistions and amount of the standards of education and research in the universities."

Since these, company, resistions and amount of the standards of educations and insenting standards and the standards of educations and entire the standards of educations of the standards of educations and entire the standards of educations of educations and entire the standards of educations of educations of educations and entire the standards of educations of

# LETTERS TO THE EDITOR

Central institutions under attack

Sir.—Before launching their mis-leading, sometimes obscure and fre-quently misguided attack un council quently misguided attack in central institutions, (THES October 14), Messrs Cumper and Neave would have those well to have checked their facts in a way befitting the hest traditions of scalestic enquity. First of all, the role of the inspec-torate in coordinating the development of the central insulutions exists both in theory and in prac-tice, as anyone who has been closely involved with academic developties, would readily confirm. The inspectorine has ensured that these institutions have retained and further strengthened their cumunitby preventing their expansion into the non-visual arts and humaninos, areas which are the exclusive pre-serves of the university sector in Scarland.

The present mechanism retding proposals for advanced level courses was introduced in lare 1975, whereas the operation of degree-level courses has been a notable festure of the mainrity of central institutions for many years, including the two which perhaps unwisely were redesignated as universities.

resulted in predictable pressures for the vincoum in technical educa-tion crested by rifeir redesignation to he filled by alternative means. It also meant that the two largest central institutions were removed from the cooted of the Scottish Education Department and its coordination of course provision at

It is guite illogical to argue, Cowper and Neave do, that to It is quite illogical to argue, as Cowper and Neave do, that the existence of a central mechanism for vetting the introduction of advanced courses should result, theoretically, in a clear-cut distribution of tasks between central institutions on the one hand and local authority colleges an the inter. They ignore, among other things, the pressures arising from the redesignation of two of the central institutions referred to in the preceding paragraph.

They go on to institute that

They go on to inslutate that administrative homogenehy is a fassile, sluce the central institutions make no attempt to malyse the factors involved in developing un educational institution. They write of the "lifting" of courses (even at the upper em) with the introduction of Council for Notional Academic Awards alegree courses)

#### Llbrary development

Brirish Brookings would demonstrate the virulence of "the British diseose" which it was supposed to help to cure,

SRC?

SRC?

SIRC P

Sures most strongly but the SRC's other activities have all been affected. Inevitably, some academic scientists are trying to resist the treed, arguing that the job of a rescorch council should be to assess the "scientific excellence" of re
Sir,—James Thompson GIES, September 30), srguing for carmarked univorsity grouts, chooses two very arbitrary turgets for library dovelopment: 7.5 per cent of the total library budget for library purposes and 100 volumes per full-time student. Until s case more convincing than his bald statements that the first is "probably" the current true figure compared with the Parry Report's recommendation of 6 per cent, and that the sacand would seem "a very modest target" to an outsider, the arguments will be rightly distributed.

established in the furtiter education sector and transferring them to central institutions "to fill empty places". It would be itelaful if examples were given to substitutlate such assertions.

Again, the "bold suggestion" of the Educational Institute of Scotland is applauded, but the helief

on which the suggestion was based is itself dubious and no attempt is itself dubious and no attempt has been made to substantiate in "fligger" does nut necessarily mean "mora efficient". They equata dia dissolution of the Dundea Instituta of Art and Technology that the Dundee Cullege of Technology) and the concominat legal recognition of the separate identities of its two commonent culleges, with the experience of the convent

ties of its two component colleges, with the expansion of the control institution sector in blatant disregard of the "excellent navice" given by the EIS.

They go further soil assert that this was "e decision that in retrospect was most unhappy, given that the folling birthrate and education cars were likely to be felt mass exerctly in was where the new land. severely in ureas where the new lustifution [sic] specialized." This campletely ignores the reasons for the dissolution of the ovlginal insil-

suggestion that a Scottish Assembly form of planning upon (these) insti-tures. . . " Present evidence of Scattish Education Department con-Scattish Education Department con-trol does not support such doubts. On the contrary, the real question is whether a Scottish Assembly can keep the universities in line with "the hard-nosed criterin of the man-power plumer", especially if the universities remain as at present under United Kingdom contrul.

The scademie standard of the degree courses offeced by central Institutions is comparable with that of ony other degree course in Bri-

course provision in Scattand con he credited to control institutions. My own college introduced Scotland's first degree courses by industrial engineering and in an sing, and hopes suon ta launch degree cuarses in applicable mathematics and chemistry with management. Although among the first small group of col-leges to be designated as central institutions in 1901, we look neither to the past nor to the polyterinies for our reputstion or justification.

DAVID KENNEDY,

librarians are, perhaps, lagging behind their fellows in other kinds of libraries in this as in other ospects of library development.

Many would agree with Thinipson that the provision in universities of adequate library accommudation should have priority over sports halls and theatres. But in a wider context, there or a many who also beliavo that adequote accommode the for mursery, primary and secondary schools must come hefore university provision. All of these see subject to DES resource ullocations. Earmarked grants, like published standards for library provision, are props for the embattled. lon, see props for the embattled, hut pitfalla for the progressive. Thair size would be hound to reflect a comious estimate of need

Sir,—In at least two his, leader 1 THES, September in the his the reverse discriminations.

given preferential treatment question of whether question of whether the lower for applications anyone in the debte the question of whether the question of whether hullvillum blacks prefered lakke come from depring grounds?

who gives way before the der-of violent students for, to ke."

in both cases, of course his agenus action is the are man; with the active, vodence i potentially violent—whi agi.

libryon's report on the lides' makes clear, the political at hups physical "muche bear thuse who invoir rome than

Kathleen Hughes Fun

JEAN PLOOD, Principal, Newoliam College,

Women interfluering

Sir,—Yor keep writing about the rending engineering in universe the department of civil organist the department of civil organism to the department

must tuxpayers.

Clearly, their background the issue. What is the ken may say, is that they ken deprived race. Could you far It is hard to imagine, driving out for student places, Saudi Arahia's to the collection of temporary, handful of institutions of higher prefabricated buildings behind education are being required. u defence of the seement should receive special because other individual Jeddah Airport that is the main expand in a dromatic woy, campus of King Abdul Aziz Unlonly by ruce, have bended (Mr. Bakke, who it is lewish, could surely real versity, that one day the site will house one of the most prestisame principla—with as Mithilly East-and, it is hoped, ported reverse discrimination it build, apparently, because a Capoll has shown the policy at impupular with most Amenia. This is like arguing fix a build "vice-chancellor is the street when the forest the fore

Named after the charismatic monarch who earlier this century welded the ancient warring tribes of Arabia into today's modern nation State, the university this year celebrates its tenth universary. But it is only now that its expansion is really tak-

By the your 2000 Its 900 hecthe Hejaz as a spectacular backdrop, will have been transformed into d University City with a The cost of this prudictions pro-fer has not been made public, lut some estimotes put it at over

Work on implementation of the Master Plan Is now due to get onder way. In the meantime, buildings costing up to Elm ench with a planned lifespan of only a decade are still being erected. They will be pulled duryn when

Sir.—May I inform you ment that Newmann College, Cambridge in an Newmann College, Cambridge in the University of Cambridge and fellow of the collegue form her felends, collegue form of an outright git of yearly contribution.

The fund, in be called the form of an outright git of yearly contribution.

The fund, in be called the form of an outright git of yearly contribution.

The fund, in be called the form of an outright git of yearly contribution.

The fund, in be called the form of an outright git of yearly contribution.

The fund, in be called the form of an outright git of yearly contribution.

The fund, in be called the form of the problems. As with every sector of development in Sandl the cost but the speed with which the jab can be done.

The Sandis ore well awore that the oil will not lost for ever. The aim is to create a modern, offluent in the sphere of study in the same which will not rely on oil for its interesting the problems. All contributions to the late of the period soil.

In it is a budget for this year of fillow, the university has nu money problems. As with every sector of development in Sandl the cost but the speed with which the jab can be done.

The Sandis ore well awore that the oil will not lost for ever. The aim is to create a modern, offluent is lamited interpolation is perhaps the highly trained and educated population is perhaps the highly trained and educated propolation is perhaps the highly tr which will not rely on oll for its grammes, tuture prosperity. In the pelltop priority".

College.

All contributions, of any size of priority.

All contributions, of any size of the be nost welcome and will be divided by 1980 a quorier of the next welcome and will be divided by 1980 a quorier of the next welcome and will be devoted warded to the bursar, Newsband 1 to education. Thus it is that a lenge, Cambridge CR3 9DF. Chest new school building is completed by made made mayable to be improved by the country every

Dr Abdullab Nasseiff: vice-rector of King Abdul Aziz University

University with a future

Riyadh University, for example, the country's oldest, in- diseases indigenous to the creased its envolution in 1976 by country. Geology and desalinper cent; and the University of Petroleum and Minerals at trate in areas which will be Dhahran by 20 per cent. Enroldirect use to the city, ment on the Jeddah and Mecca. In addition, the university we campuses of King Alidul Aziz provide a variety of commerce University (there is also a small college at Medina attached to KAAU as well os the fumous Islamic University of Medina) rose in 1975-76 by 76 per cent.

Such expansion incritobly brings in its wake major prohlems. Not least of which is where to get the academic staff from King Abdul Aziz University only 20 per cent of academics are Saudis, and most of these are in senior positions. Much of their time is taken with administering aclping to plon the university: consequently, o great deal of the teaching is done by ex-patriates, mainly Egyptions and Pakistanis. Britons are the most numerous from the western

Nently 10,000 students are now enrolled on the two campuses, and plans are well advanced for university. When the University City is completed it is estimated that the student population will he over 18 000. But recent projections indicate that demand

could far nutstrip this figure. Complicating the development the university is the foct that ull facilities have to be duplicated : male and female students ure not allowed to mix. This parollel lecture pro-

It is planned that King Abdul Aziz University should have a strong service role in the community. Many of its facilities will be open to the pepple of Jeddah mire apart from the fact that in the city; and thousands of the support staff the school building is completed who will be living in the University will be living in the University will be supported. ionewhere Ip the country every sity City will have moved there

King Abdul Aziz University

Jeddah-Mecca, Saudi Arabia

A special report by The Times Higher Education Supplement

Thus it is that the health centres will be available in certain circumstances to prdinary people, and much of the medical research will be concentrated on tion research will also enneedthree use to the city.
In addition, the university will

provide a variety of commercial such things as accounting and morketing. The university will also kelp fill the gap in middlelevel provision: n wide range of vocational courses will be laid

But the university will also have unother special "service function" and one which essential to an understanding n how it sees itself developing. As Sheikh Ahmad Salah Jamjoom one of the founding fathers of the university, put it: "Know ledge must not unly serve That is no empty rhetoric. Mus

lim scholors have, of course, long attacked the notion that know edge, even pure science, is " ab have insisted that there can he no true knowledge without of understantling of its role in God' scheme of things.
The Muslim world in general

and Sandi Arabia in particula oil bohanza as a chanco to re verse the eclipse by the west of learning. They ore convinced of the possibility of developing highly sophisticated systems of for example, "Islamie" social science, "Islamie" economics, "Islamic" medicino and even islamic" mathematics.

The aim is the craation of o uer Islamic Golden Age of culture and learning: Islam with a mod-ern face. The de-westernization of knowledge is the first central task of the enterprise. King Ab dul Aziz University will be expected to moke a key contribution.

> page XVI Master Plan, page X



#### (Dr Ontar Zuben | KAAU rector. 16

Pilgrims' progress Geologists' paradise Islamic economics British Council project VI | Elusive books R & D centre Mecca campus Master Plan 2000

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One of the university's most important centres is the Institute for Applied Geology

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Sandi Arabla is a geologist's dream. The west of the country is dominated by the grantic and volcanic hills of the Arabian section of the pre-Combrian Shield, which makes up most of the continent of Africa and the rocks of which are between fout million and 1,000 million years aid. To the east and centre lie the younger so-ralled "cover rucks" of the Shield: h is here that the off

what purificularly excites the "Shield genbasist" at King Abdul Aziz University is the expusive of the rocks, uncluttered by vegeta-tion. As one wadenic put it: "I

trail has one installed pill it: "I rail has out of my laboratory window and see geology."

Not only can lie see geology. In contrast to some of his collougues in other disciplines, he can actually do h, too. Expansion at the paiversity is so rapid, change so forward discounts. fast and departments so embryonic that harassed administrators and deans often have time in do no more than hire the academics. When they get to Jeddah they have in fend for themselves.

While a mathematician may be told the equivalent of "here'a a room, n table and some paper; get on and do some maths", the geologist will find full progrommes and, most important, trucks ond equipment field work. available for extensive

Oil is not going to last for ever, Maybe not much more than another Maybe not much more than another 30 years, occording to some experts. The pre-Cambrian Shield is rich in capper, zinc, iron and phosphates. Gold has been found. Geological know-how will be vital in the country's long-term prosperity. This realization is reflected in the importance attached to the subject at King Abdul Aziz. There is, of course, a university geology department for undergradances. But the prestige institution is the past-

the prestige institution is the post-graduate listitute for Applied Geolugy, the only part of the university to offer PhDs.

Inder the direction of Dr Almed al-Shattl, the institute has recently moved from its former home in a leddah mansion to opolem, albeit prelabileated, premises on the unit empress sto. The cost of its new building was 8 million Riyals—about fixed was 11 million fixed was 11 million fixed was 11 million fixed was 11 million fixed work the lastitute works 11 million was 12 million fixed works 12 million fixed was against Arabic in the university's geology department.

Significantly, the institute works 11 million was against Arabic in the university's geology department.

Significantly, the institute works 11 million against Arabic in the department. English is the language of the technical sections of the Ministry of Potroleoum and Mineral Resources in Riyadi. Times who finish their pastgraduote course at the institute will be expected to stop streight into senior civil sorvice positions. linder the direction of Dr Alimed

positions,

One says "will be expected tocause, st present, as in most other
parts of the campus, fecilities far
outstrip demand. The institute has
o hare, handful of students. "There
ore so many geademics here thot
we'talk of a teacher/student ratio
rothee than a student/teacher
ratio", said one of the researchers.
Things, howaver, ore soon to
change. The 30 geologists, who include four Britons, as well os
indians, Pakistanis, Egyptians, Australians and Italians, will be joined
by 50 andergraduates next year.

by 50 undergraduates next year.

Reading for e BSc, the undergraduates will already have done
two warr basic science et the
university and have studied English.
With the existing past-graduate
focilities, the students will be able
to go right up to doctorete level
without having to go abrond as the
vast majority now must to complete their, studies.

The institution currently has threa molt, eress of work: minaral exploration, hydrogeology and engineering geology. Petroleum geology is concentrated in the University of Petroleum and Minerals in Dhohcen in the 'east, ; ;

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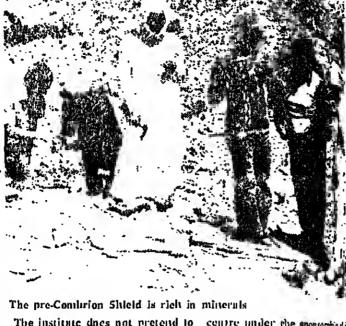
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compete with such activity; nor is
it in the business of prospecting.
But it began a major project this
Mny aimed at charting in detail the
rock types of the Shield and their

Water resources management Is becoming a key problem in the country as the helter skelter urban and industrial development conthines. In addition, a major expan-sion of irrigated agriculture is being The hydrogeology specialization

The hydrogening specialization includes areas such as geolydralogy, groundivoter geology, hydrogeochemistry and geophysics.

The arrived of indergraduates will enoughte the present stage of the instituto's development, fi was created in 1970 as an independent

Resources, the United No Development Programme of the sco. It became a par of the province of the score a par of the score of the scor scannied for more than hilf.
staff in the early days, etc.
heing phased out. heing phenol sees the ince-heing the nucleus of a functi-lege of Earth Scinces at-university, taking in disciplina

as necamography and necessary centre for desert studies and Near chaos reigns. The logistics ginning to receive the mira

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# Hurdles to pilgrims' progress

The annual pilgrimage to Mecca is one of the

most sacred events of Islam. is also one of the most lifficult to plan.

More than a million onl a half Muslims from all parts of the world will be gathering on the inhospitable Plain of Arafat outside Merca next month. They will be performafford it, must make at least once

For four days they will be praying in Mecca and corrying out complex rituals at Arafat and the nther holy areas of Muna and Muz-

50-mile trek to Mecco they ara housed in two gigantic "pilgrims'

of moving and controlling such a multiude of people would tax the tessures of the most sophisticated pinning systems. For the direction plenning systems. For the durotion of the Haij tha west of Saudi Arabia simply grinds to a hult. The Red. Sea roadstends are more tightly immed than ever; the air.

Post gives up the fight and directs. the endless stream of western Maker. Institutes men to Riyadh in the Bulf. It was

But the worries go far deeper than just making sure everyone gets to Merca. Health problems are enormous: many of the oliginus come from societies where hygiene

Saffed by a team of 10 reis rudimentary. This year's cholera outbreak in the Middle East is an udded hazard. Sanitation is primi-tive. Human except is antile deep in places. In addition, more than a million animals are ritualistically shoughtered and their entrails left

Planes spray the pilgrims with DDT; chibrioe connous attack the next month. They will be performing the annual Half—the pilgrimage to the City of God on Earth which is one of the five pillors of Islam and which every Muslim, if he can afford it, must make at least once

The Hajj is one of the most sacred events in the Muslim calender. It is also very big business. Despite the proliferation of plush hotels, occommodation in Mecca is the galledness the city is a local. nther holy areas of Muna and Muzduffit nearby. Hundreds of thousands will be moking the (optional)
short journey to Medina to the
tonul of the Prophet Mulnonmad.
Most of the pilgrims enter Saudi
Arabia by see or nir at Jeddah.
Untif they are reody to begin the
50-mile trek to Mecco they ara

lerminals." In the city centre, The remainder of the folthful arrive from the north vie Jordan and the Medina rood. At peak periods Mecce's population swells from its usual half million to neerly 2 million.

But their hands are largely tled. Proming restrictions are virtually inknown oud any attempt to curb the rights of private businessment would be untitable. Nor is it nossible to limit the numbers coming from abroad by a quota system; that would be seen as an unpardon-

ably intension between man and his

It was to forms on these problems Haii Research Centre, was set up at

Staffed by a team of 10 re-searchers, only one of whom, the director, Mr Sami Augard, is a Saudi, the centre's philosophy is that, wherever possible, small is Mr Angawi feels that the way to

hest articulate concern over the growing problems of the Hajj is combination of highly specialist projects by the resident researchers and the holding of prestigious seminars to which leading experts from throughout the Muslim world are invited.

All the roscerchers are Muslims. They heve to be becouse the "Muslims only" rule in Mecca and Medina is strictly enforced by police guarding the approach roads to the chles. (There is a so-colled "Christian by-pass" for ears needing to take the Meeen and Medina roads for other destins-

Most of the researchers are now Most of the researchers are now prepreparing the first litles in o prajscted series of monographs which the centra is planning. Topics include "Fundamentals of lish", "Former of Hajj", "Planning of the first onnual vulture of 'luji Studies' has just appeared. It contains panors on the work of the centre and, importantly, e record include "Fundamentals of lish", of the first onnual vulture of 'luji Studies' has just appeared. It contains panors on the work of the centre and, importantly, e record in the inviversity last December. The seminar is to be a regular event and central to the development of the centre's research. intended as reference books.

Another part of the centre's ambitious publishing programme envisages technical and scientific reports almed at the decision makers and selected experts. Titles in the pipeline include "Administration and Organization of the Haji in Asio", "Eveluetion of Meat of the Rituel Sacrifice at Muna" and "Development Projects in the Hofy Ares."

archers are working on the increasingly complex problems of the

Hajj" and "The Hojj of the apparently proposed the building of Prophet: an Historical and Geo- a fly-over the Ka'ba.) graphical Analysis".

The first onnual vulumo of " Huji

Seventeen leading Muslim architects, economists and scholars attended last year. They included noted whose most famous bnok is Architecture for the Poor, Sheikit Abu Bakr Siray Uddin, the formec Keeper of Oriental Menuscripts at the British Museum, and Kelinit Siddigni, director of the London-based Muslim Institute.

Three "populer" books almed at explaining the Hajj and designed for taochers and students are being prepared: "Clongs and Development in Mecca", "Mecca and tha

lightweight, temporery buildings to house the pilgrings at Muna and recommended that cars should be allowed only when essential. In the Saudi context, with tho

In the Saudi conlext, with the country's all-nut dash for grawth bosed on large-scale technology, the proposels for "low imput," technical sofutions to the Haji problems are unlikely immediately to meet with a sympathetic hearing from Ringdh. It is accepted that change will heve to come slowly.

An integral part of the centre ls its information unit, which con-sists of on information retrieval unit, a small, specialist library, microfillus and translation facilities. A central function of the unit, aimed at combeting the university's ineviteble academic and geographic isolation, is to keep the researchers supplied fast with all the learned journals they need.

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Concership of land is conditional on its ose. The individual does not "own" the land; it is in trust from Allah. He is responsible for the use and aluse of this trust. The aize of land-holding is limited not by a uniform arbitrary ruling but by the extent of actual collivation on the part of the tenant by houself and with the help of hired labour.

Private property, in sn far as it is permissible, is as sacred and in-cladable as the life of the owner. Islam considers the obolition of prirate property or its quantitative

Islam forbids hoording of com-modities of any kind, porticularly food, if the alm is the ercution of so artificial scarcity and rise in orders. All methods of creating ortificial price increuses are condemned in the severest terms. Price control by State authorities is also ruled

Zakah is usually translated as "the poor tax". This is in feet wrong as Zakoh is not salely for the poor, nor is it a tax: although the islamic Smit collects it, it does not levy or impose it it is a spiritual due required of all Muslims. Payment of Zakah is a duty which is laid on all preservey.

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development; incrensing disparities at reglonol, notional and international levela; coexistence of hunger and offluence; irrational use of nan-renewable resources; incongraity between technology and levelor mental needs; mentalities developmental needs; unsuitability of production and consumption processes to environmental needs; ex-plottation of the poor and the week by the rich and powerful; inflation and stugflation; structural deformi-ties in relations between developed ond developing countries,

All these and many more proli-lens have failed in he tuckled withions have fuled in he tuckled within the fromework developed by post-Keynesian economics. This is being realized even by those economists who had earlier thought that their sophisticated economic models would be able to deliver the

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problems can be approached not as economic problems in isolation but in the context of an entire social

in the context of an entire social system.

This argument constitutes a point of departure for the Muslim economist. Islam is not a religion in the limited sense of the word, interested only in man's salvation in the limited sense of the word, interested only in man organic whole and its problems are approached not in a mechanistic way, hun in the light of the mural values and social ideals that Islam expounds.

The purely positivistic vision of the westal sciences developed in the West becomes obsolete in this new context. Man is treated as the passessor of o morel personality, not just a complex of molecules.

Outside the Muslim world the social sciences have followed ofmats unreservedly the model of the natural sciences with the result that technocratic solutions are being imposed in the name of science.

Muslim economists believe that reorientation of approach ond a perconstruction of the main and forces.

Muslim economists believe that reorientation of approach and a reconstruction of the entire framework for economic analysis and policy is needed to duriness economics made again to the service of humanity. During the lost 50 years over 80th knows and uticles during the lost of the heart written by Muslim economists uticulating different aspects of the new paradigm they want to develop. In February 1976, the First Inter-

new paradigm they want to develop.

In February 1976, the First International Conference on Islamic Economics was field in Mecca under the chairmanship of Dr Muhammud Omar Zubeir, the leading Arab economist who is President of King Abdol Aziz University. The conference was attended by 200 leading Muslim economists from all over the world.

Thirty-five papers were presented an such subjects of the neture of Islamic economics; problems of pricing; consumption, distribution and growth in an Islamic economy; the establishment of an interest-fraceconomy; and the development of economic cooperation among Muslim countailes.

lim countries.

The conference resolved thar an Toternational Centre for Research no Islamic Economics should be nn Islamic Economics should be established to continue its work. King Abilul Aziz University accepted the projosal and has now established the centre under the chairmanship of Dr Hasan Bolkhi. Annther leading Muslim economist, Dr Auns Zarqa, is to help the centre in its Initial phase. Dr Muhomnod' Sugr, from Jordon, ond Dr Umar Chapro, from Pakistan, sremanng others acting os advisers. Dr Zubahr raumins the moving spirit bolded the antire schome.

The main objectives of the centre are:

To initiste, sponsor and coordinate research on different aspects of Islamic economics. This includes the development of a more rigorous Islamic critique of contemporary economic theory and policy, an evaluation of the present would economic situation and reconstruction of economic theory and socio-economic policies in the light of the values and principles of Islam.

To build a data-bank for the Muslim countries and sponsor research on the prospects of economic cooperation botwaen them.

To produce text books and other, aducational media on Islamic economics and promote tha teaching of Islamic scottomics and posterial descriptions of the more policination of the policination of the more policination of the policination of the more policination of the more policination o

To establish a library and docu-

To establish a library and documentation centra on Islomic economics and make avangemants to share these facilities with scholors interested in Islemic economics all over the world. The centre plans to bold an International Seminar on Monetary and Fiscal Economics of Islam in April, 1978. Twenty scholars will present papers to this seminar. The themes have been published in Monetary and Fiscal Economics of Islam in April, 2007. Research, produced jointly by King Abdull And University. and the Islamic Foundation, Leicester.

The long-term sint of the centre, is the formulation of an economic of declarity capitalism nor inbomon sociolism.

Professor Kingsid Aminat is director, the Islamic Tompale of the Professor Change of the Professor Change of the Professor Change of the Conomic of the Capitalism nor inbomon sociolism.

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cal and engineering students.

In the rush to develop the quiver- in Turkey, both of which have the exercise, Mr Jarvis is ity, improvisation is all. Practically incientation years and teaching in out, has been a vicilm of a success. If it had been to encounter the control of modution to lecture halls to student restaurants to inhuitistrative offices estation in imports in the tension of the tension o huildings, replacing out tempurary muss, are also temporary. Thus it is that the British Canneil's major and soft), teachers, administratures university project has been sited, and consultants from Britain. The nutil very recently in a converted lemoande factory off the Mecca lemoande factory off the Mecca and the property of the major and the project of the meccanic statement of the project of the meccanic statement of the meccan

A continuou problem facing universities in many developing conntries is that secondary school students are taught in the native langue and then have to switch to English-especially if they are studying science subjects-when they get 10 university.

Early in 1975 the embryonic nedical and cogineering faculties at King Abdul Aziz approached the Cunnell and usked it to provide the medical and engineering facul-specialized English language courses the only taking the cream of the Cunnell and usked it to provide

Although successful, the scheme was short-lived. The drive for Arabization unude the year politicully unottractive to the university authorities. At the same time tho conntry's religious lenders were concerned that English-medium teach-ing would undermine the university's Islamic base. They pointed to the Amorican University of Belvut in the Lehanon and the Middle East Technical University

have been expanded to take in unrship, interentially and applied geology stinients, all of white nearly 1,100 students projected for this year, the centre will be one of the most flourishing on the campus,

Mr. larvis feels that the indiversity may trant to go it completely along by the next academic year, although the emphasis will be our or orderly sud gradual retreat. The council will stay with the project as long as the expertise is needed.

Paul Moormal as the project of the emphasis of the council will stay with the project as long as the expertise is needed.

R & D institute aims to

emphasize indigenous needs

less summthly, the council in ment might have been much! Nor that he is concerned to ending of the project. Week inst Paid Educational Service main area of activity is sill term cultural relations."

A steady stream of sai from Bricdu, for example, visited the university over the Is months. Advice has bear about library classification of the needs and Mure than 40 Cunnell people were involved in the project: English for the setting up of Manuel Special Purposes material was produced and relevision and sound engineers installed for monitoring the video and language laboratory grammes in a number of ge

lu aildition, a team of redeans from northern with headed by Dr F. B. Bengie For 1976-77 the contract—again a turn-key operation with the council loying on the facilities in return for a fee-was renegotiated. Its Trapical Medicine, Least the value went up to £1.3m and the time of Trapical Medicine, the minister of students to 700. With poul, and the mismites of St. and the mismites of St. field, Liverpool and Newasile,

for its incoming students.

This was not the first such contact between the university and the Council. It helped recruit a large number of lecturers in 1971 to service the English-language or lentation year which all students had to go through at that time.

Although successful, the scheme A continuing council pressure

There is, of cause, another pol-lem which the council can be for From this year, therefore, the alumn that is the relumned be conneil involvement will begin to tish universities to take space be phased out. The contract for whom they judge not we come be plused out. The cuntinet for 1977-78 envisages the continuation of a council officer as the project director, and the council will carry an providing consultancy services ago in get a large make default recruiting staff. The staff, however, will now be an independent and recruiting staff. and recruiting staff. The staff, medical students in London in however, will now be un university, versity accompanied by a post rather than connell, contracts. In pay for the extra facilities and

On top of this, the project has now left the lemonade factory for purpose-inite premises on the independent of the university compus. It is planned that the new huilding should become the increase of the university's now hongoing centre.

Already the two-year courses have been expanded to take in the project has a research have a decident and looks to sirry agreement and looks to sirry agreement and looks to compening with Rhyadh Medical and the state of the project has a research have a decident to the compening with Rhyadh Medical and looks to compening with Rhyadh Medical and looks to compening the state of the project has a rangement to be tween the compening the same to be a season that the lemonade the project has a rangement to be tween the lemonade to the project has a rangement to be tween the lemonade to the project has a rangement to be tween the lemonade to the project has a rangement to be tween the lemonade to the lemonade to the project has a rangement to be tween the lemonade to the lemonade

Paul Moormu

scrolars from all over the world were invited to Join the coilege. The response was predictable. The Sacred Mosque has olivoys been a contre of religious education commending nuch prestigo throughout the Muslim world.

Most of the teachers come from Expt with some from String and Egypt with some from Syria and other Arab Muslim countries. Thesa flur much remains to be done.

countries still today provide most of the academic staff.
In 1965 the curriculum of the college was broodened to encompass the wider field of Islamic studies and it was subsequently renomed the College of Sharia and Islomic Sudies. In 1971 the college was becoperated into King Abdul Aziz University. The move gave a further impetus to the rapid growth of the college.

its basic alm, however, remained the same: to be a centre for the training of teachers and promulators of Islam, to pursua research into the various areas of Islamic mudles and to contribute to the witchment of Islamic culture.

The Collega of Sharla thus became tha basis of the Mecca campus of the university. Today, between the faculty of Sharla and Islamics that motivales so mony distributed to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign students to come to Mecca. It is a distinction that is occurred to the foreign s Research ectivities in developing countries uften hear little relationship in local needs and requentaries. The projects indicate, rather, the country where the researchers were trained. In such a climato lucul industry finds itself alienated from the agricultural methods of the research stipport and back-up it so tragently needs.

That Research and Dovelopment of the realization, it emphasizes that the country's development plan cannot overleak the interior of the realization, it emphasizes that the country's development plan cannot overleak the interior of the realization, it emphasizes that the country's development plan cannot overleak the interior of the realization, it emphasizes that the country's development plan cannot overleak the interior of the realization, it emphasizes that the country's development plan cannot overleak the interior of the properties of the individual the left of the individual training of the left of the individual training of the left of the individual training the life of the individual reports and proposals.

generol, studente ore provided with accommodation and a monthly ollowonce. Students are encouraged to learn from the environment of Mocco, its rich history, its timolass values and its rugged basuty. Teaching is based ou lectures, and, in soois cases, intorials. The courses are long and intensa. The faculty of Shario and Islamle

studies awards a four year first degree in Sharls, Arabic language and literature and Islamic civilization. A further three years study lasts to an MA by sxomination and

Mecca was the first part of King Abdul Aziz University to offer doctocates. The groduates of the faculty of Sharia and Islamic studies enjoy the stotus of alima (religious teachars or "learned men"). It is the desire to become alims that motivates so mony foroign students to come to Mecca. It is a distinction that is achieved only by a selected few.

tion hosted the First World Confer-ance on Muslim Education. The a perinquent World Centre for Mus-lim Education. At present the

cautro is ut an embryonic stage. It is hoped that it will bogin operation within a year.

Under the leadership of Dr Joffer. Sabbagh (a mechanical angloser by training), the deputy Chancollor of King Abdul Aziz University in charge of the Mecca campus, the number of students and stoff growing rapidly.

Ha has attrocted to the campus such scholars as Shalkh Muhamorad Mutawalli Sha'rawi, the charlsmotic Egyptiant Minister for Rallgious Affairs, and Shalkh Muhammad Outh, whose cleder brothor Syed Quth, the man of leiters, was executed by the Nasser regime in 1966, a crime which shook the ontire Muslim world and liborsl opinion avarywhera. Shalkh Muhammad Outh's best known book, telom: the Misunderstood Religion, has been translated luto many languages. Another distinguished scholar basad on the Mecca campus is Shalkh Muhammad Al-Mubsrak; the former Mipistar of Religiona Affairs in Syrio.

Pigos for the development of the morous University of Mecca are now at an advanced stage. The accounts and the control of the development of the morous University of Mecca are now at an advanced stage. The accounts Ha has attrocted to the campus

now at an advanced stage. The new uow at an advanced stage. The active University of Mecca will be a modal university inspiring into oducational institutione of the antire Muslim world. It is important to hear, in mind that King Abdul Aziz University unlike other universides in the Arab world, is not eccking; to role, gate the traditional Muslim system of learning to an inferior position, or even to isolate its subject matter, to a fixed part of the sylabus. Oo the, contrairy, there in an alloud effort to cast new subjects and new disciplines, as well or more established ones, in an Islamic mould, has such, the Ielamic outlook of Meeca University will be reflected not only in its approach to various subjects—science, technology, architecture, the social sciancee and so on—but also in its immodilate, they are the social sciancee and so on—but also in its immodilate, they are they wors, the overy of the entire Muslim world, will be focused on the immodilate, they are they wors, the overy of the entire Muslim world, will be focused on the immodilate, they are they wors, the overy of the entire Muslim world, will be focused on the immodilate, they are they wors, the overy of the entire Muslim world, will be focused on the immodilate, they are they work they wors, the overy of the entire Muslim world, will be focused on the immodilate they are they work they work they overy of the entire Muslim world, will be focused on the immodilate they are they work they work they over the contract of the world will be focused in the immodilate they are they work they over the contract of the world will be focused in the focus of the entire they work they are they are

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and sensitivities, is their domination by either the Western or the Marxist world-

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ovnwedly "Muslim countries" in a parely rational context devoid of oll values and idealogical interpretations of cosmology.

Furthermore, since the books, the

instructors who ore themselves uncnn-

scious students and practitioners of the

Western or Marxist educational systems,

are all products of non-Islamic origins,

even these rational sciences and techno-

logy curbody the Western or Marxist cosmological doctrines. In the teaching of

these subjects the available Western or

the Marxist literature, deceptively called a modern " and " socialistic " respectively,

is used. The plogiarized versions in West-

orn or local languoges, if at all they exist, might, be qualitatively inferior but in

ideas and conrent they are mostly the pra-duct of uncritical and blind imitation. To

the non-Islamic humanistic-social sciences

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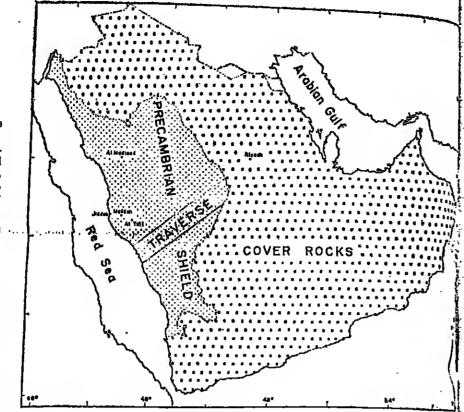
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KINGDOM OF SAUDI ARABIA



DISTRIBUTION OF PRECAMBRIAN SHIELD AND COVER ROCKS SAUDI ARABIAN PENINSULA

# A Research Project by the Petrology Department of the Institute of Applied Geology

by M. J. Roobol

The genlugy of Saudi Arubia can be polation of surface geolog and g divided into two main groups of rocks. logical boundaries below the thing In the west a Pre-Cambrian shield of at least 1,050 to 600 million years old is well exposed in the desert, while the centre geological maps and reports at wall and east of the country comprise the "cover racks" which nverlie the Pre-Cambrian Shield and are younger than 600 milliun years.

The appearance and genlogical problems of these two orens of rocks are very different. The cover rocks are sedimentary and it is within them that the nil the magnetic data and air photo ond gas neem. In contrast the Pre-Cambrian shield consists largely of areas. The second stage was in the igneous rocks, about two thirds of plutanic rooks (granite, granudinrite, dinrite, gabhen), and nue third of volcanic and scdimentary rucks. The shield rucks have been invalred in several aragenic episndes and must of them show same degree of metamorphism. High grade metamorphic rocks are not uncommun. Mineral exploration within the shield rocks is concerned with the search fur

enpper, gold, silver, leud and zinc. The Pre-Cambrien shield of Saudi Arabia is a continuation of the Pre-Cambrian shield which forms most of the contineut of Africo end becuuse of the bettor expnsure end access (lack nf vegetation and political unrest) lt is expected that in the future much informetion on the origin and metallogenesis of this vast Pre-Cambrian shield will be forthcoming from Soudi Areblo. Over the post decade much aystematic mapping of the Pra Cumbrian shield of Saudi Arnhia has been carried aut on o hasls of quadrangles measuring 1° latitude by 1° longitude by the United States Geoingical

longitude by the United States Geoingical Survey, the French Ruroou de Recherchee Geoingiques at Minteres and the Saudi Arthbas Directoratt General of Mineral Resquees, all based in Jeddon.

A project was commenced in May, 1977, by the staff of the Petrology which is the study of a strip ocross the Pre-Cambrian Shield between latitudes 19 and 24 north frig. 1 marked Treverse). The olm of the study is to define systemetically and uniformly the rock ton.

The first store of the states and realization.

The first stoge of this work which was production of a strip men covering en area measuring 600 by 150 km or ebout 190,000 km². This area comprises 31 qued-strengtes will of which are covered by the graphs and 1 100,000 alreage air photogen of the chemical characteristics more rescaled in the strengthen. The chemical characteristics of the strengthen the chemical characteristics of the strengthen the chemical characteristics of the chemical c The first stoge of this work which was

cover of the peneplained suite for 10 of the quadrangles B.R.G.M. I:1000 while fur prother nine, similar mine reports by the H.S.G.S. are available the remaining 12 quadrangles of U.S.G.S. 1:500,000 maps are available.

Because of the varied good correrage of the section, the logic was to compile all existing maps and areas. The second stago was to travelle area to identify and gather a referen cullection of samples (as these at

lithustratigraphic grouping can be the preliminary field inverse carried out in three parts using the nul field fucilities of the Institute Applied Geology available to the graduate sindehts. One watering tanker, one long wheel base Landous and two Toyota Landerulsers were be and two Toyota Landerulsers were be and the cook and assistant as well us a gulic, cook and assist One thousand reference rock san were enlicted. Based on this site control lwhich produced guite geological surprises despite the presented to the presented strip map was work) a provisional strip map was a piled which will be available at international geological meeting on Pre-Cambrian Arabian-Nubian Shields he held at the University in Patrice

The main results at this stage as a marized in the niap is that the stage as a marized in the niap is that the stage at the can be regarded as a sense of distinct north-south trending lithologic provinces north-south trending lithologic provinces for belts of contrusting the tree of metamorphic fortists. The complex narrow belts of granife as complexes, helts of diorlie plutons, but complexes, helts of diorlie plutons, but the complexes in the complexes of feetures. complexes helts of dorle plutons, of gabbies plutons—these feetures of gabbies plutons—these feetures similar in those of the much your similar in those of the much your Ander orngenic belt of South Ander Belts of higher grade metamorphic to Belts of higher grade metamorphic to such as inhibit of inwer grade rocks such as inhibit of inwer grade rocks such as inhibit and pyroclastic rocks are barely in morphased. Norrow belts of uliration rocks are also present.

The single goost important characteristic Unesco activities and publications concommon to all Muslim technical education corning hamanistic social sciences studies systems, unniteroted, more or less by con- in technical education. cessions to Islamic cultural influences

**ADVERTISEMENT** 

Humanistic-social sciences at

King Abdul Aziz University

by Wagar Hussain

Fourth, and perhaps the most significant reason for lack of awareness ur interest among Muslims for humanistic-social sciences studies in rechnical charepresent our education systems to ourselves as being purely rational and independent of any ideology. We do this
olso, perhaps, for pragmatic reasons. The
dominant model of the curricula strucprises three parts of the curricula struc- un this intellectual challenge.

#### A Plan of Action

The task of integration of Islomic ideology with humanities and social sciences basically the responsibility of the specielista in these disciplines-law, political science, economics, sociology, etc. This connot and should not be done by Muslim generalists, octivists and public

lcaders, But who are these "specialists"? We ere aware of the ignorance or insufficient knnwledge of Islamic ideology among professors of our secularized faculties of the humanities and arts. Similarly, our professors of Shariah faculties and the traditional "scholars of Islam" (ubuna al-din) are cither ignorant or have insufficient knowledge uf the (secularized, Westernized or Marxist) social sciences and humanities.

this category belongs the works on indus-If they hove lumility, faith, will and trial management, engineering economics, ubility, both these groups of "half-scholurs" can perform the great responsi-hility of developing Islamic humanities industrial psychology, economics of public Even in the avowedly Muslim countries, the social sciences are taught in the Western or Marxist Ideological perand social sciences.

One institutional arrangement that should be attempted is in ahalish the be attempted is in ahaliah the pectires, and the limitations are taught separated faculty of humanities and arts, from the Muslim perspectives. The and the faculty (or department) of Shariah ond Islamic studies. They should be merged into one faculty with various Islamic humanistic sciences may or may not be a required or enimpulsary part of technical aducation curricula. departments on the bosis of the apecializa-Even in universities in which Islamic humanistic-social science studies are a tlan or interest of u porticulor foculty member in a porticular discipline.

part of the technical education curricula, The "re-training" of our "halfthere may rarely be any relevance in scholars" in the arons of their reletive ignarance are insufficient knowledge these courses to problems at their interface with science, technology, industriallzation, and socio-ecnnomic development. should he undertaken by various method They are taught by graduates of the traditional colleges of Shariah or minderest dapartments of Islamic studies in such oa self-learning and rosaarch during a period of subhotical leave, formal edu-ention through o aecond Master's degree or o second dactorete, rubbing shoulders in lumility with colleagues in the the Muslim or Western countries. These are mostly traditional humanistic courses are mostly traditional humanistic courses in Muslim history, theology, beliefs and practices, exegesis and dialectics, apologetics and polemics, Muslim historical forganticism, etc.

Most often the technical education curricula of the secularizing Muslim countries include neither the Islamic nor the non-Islamic humanistic social sciences ".merged" departments, etc. The Jalomic ganoralists, scholar-uctivists, etc., should be invited to universities as visiting pro-fessora as well as pert-time or full-time

The body of knowledge developed in this way will serve the needs of technical education by providing relevant textbooks stodies. This is partly due to the mis-conceptions among Muslim technical educationists and professors concerning and monographs for courses scrving the humanistic function ". They also provide the foundation for courses serving the other functions of humanistic-social aclences curriculo in technical education.

A related task is the integration of A related task is the integration of Islamic humanistic-social salances with acience and technology. The faculties and departments of acience-technology specializations (for example, thysics biology agriculture, medicine, engineering) should develop a body of knowledge and specialization in the Islamic history, phillips and cocleign of these enjages. at low priority, or irrelevant for educa-lion in science and tachnology. These misconceptions are common emong the secular and maderoist Muslims as well

The responsibility for impleorenting this general plan of action folls un many shoulders. The institutional structure can be of rarious types and these institutions con he created and supported by various means, Individuals in the community or poliversity faculty in their spare time, faculty members released from their tea-ching and odministrative duties for parttime nr full-time research, and students pursuing higher studies, in the Muslimmajority us well as the Muslim-minority countries, should all perform this social ohligation (furd kifugu).

A special resunnsibility rests no the universities and gnyernments of Muslimmajority countries, and their Islam-conscinus clites and community. Islamic rescarch institutes, Islamic conferences, ministrics of religious affairs, ennstruction of large mosques and moouments, and so on, should he vehicles for developin an Islamic humanistic-social science disciplines. While it is proper to aim ut a big push " to achieve this goal, the islomic strategies of gradualism (endrij) and easy small compramising steps (tay-sir) might be preferable in most circum-

Each denorment of a faculty or college in the universities oright create one or more positions for "rescorch professors" in an Islamic humanistic-social sciences specialty. Research and publication are better fostered when there are opportuni-ties to teach and use their output.

#### Islamic Humanistic Social Sciences

#### at King Abdul Aziz University

The King Ahdul Aziz University fnllows the semester and semester credit hours systems. All the faculties require 122-136 semester credit hours (about four years or eight semesters) for e bachelor's degrae except the faculties of medicine ond ongineering. The lotter requires a minimum of 145 credit hours in a fiveyear programme. The major activity dur-ing the first year is an lotensive Euglish ngnage studies programme cquivulent o about 24 rredit hours which are not not not not not not not the 145 credit hours required for graduation.

regardless of their faculty, must meet the "university rouniremants". Thase ere the following six courses in Islemic humanistic-sociol aclences end linguis-

Islamic Culture 401 . . 2 Credit hours Arable Literature .. 3 Credit hours English Language .. 3 Credit hours Total : 14 Cradit hours

All the students of the College of Engineering, regardless of their specializotion, must study the following four courses to satisfy the "college requirements " for graduation ; Introduction to Engineering

Economics ..... 2 credit hours Development end 2 cradit hours

A brief description of the courses on lamic Culture is given below: Islamic Culture 101:

The general concepts of Islamic faith ond culture (universe and nature in Islom, etc); propherlined; revela-lation; concept of worship and implication; personal and social

#### Islamic Culture 201:

The Quran (Its revelation, readings, criticisms of unbelievers, style and exegesis); the Sunnah; Ijtiliad and Ijua and their applications in prollems of dogun, jurisprudence, politics convents. tics, cconomics, ctc.

Islomic Culture 301: Islamic systems of family, economics, politics and criminal law or punish-

# ment. Islomic Culture 401:

Intruduction to contemporary societies; the model Islamic society in Propher's time and its characteristles; leter Muslim deviations with exemples. Cunsequences of deviations from Islam for Muslim decline in education, ecunomy, politica, military nower, etc. and on Muslim minorities. Cnntemporary Muslim society, its ideological crisis; modern Islamic revivalist movements; and strategies end solutions for Muslim revival and development.

The original proposal for e six-course. "College Requirements" programme had included a course in "History and Sociology of Islamic Science and Learning." The College of Engineering Council formed Committee to propose to the Faculty of Sharlah and Islemic Studies the possibility of incorporating this courses on Islamic Colors by compressing, for example, the first two courses Into one. These consultations have not yet begun.

The four "College Requirements" courses ere designed to satisfy the "Instrumental", and "Social Responsibility" functious. The "Management and Decision-Making" course is to be offered by the Program (Denartment) in Industriol Engineering, and the other throa by the Section of Humenistic-Social Science, Stillies in another settle. or graduation.

Science Studies in engineering within All the students of the university, the Colloge of Engineering. The content egardless of their faculty, must meet the of their courses will follow that usual luternational etandards.

However, the Islamic humanistic-sociol sciences will be thoroughly intsgrated with their technical content. The courses Islamic Culture 101 . 2 Credit hours on economics will consist of Islamic Islamic Culture 201 . 2 Credit hours normative or welfore economics, positive Islamic Culture 301 .. 2 Credit hours economics, and will use mathemetics and show engineering applications.

The faculty teaching these courses will be recruited with these goals in mind. They will be expected to produce, with the help of whatever expends necessary, textbacks in simple English at the end of the first year of their teaching which is

the first yeer of their teaching which is the next academic year. When these goals materialize we will have the first text-books of this kind.

A committee constating of lalemically-orientated faculty members from within the College of Engineering, the Faculty of Shavleh and Islemic Studies, end the

supposed reason is that these Muslims as well specialization in the Islamic bistory, philosophy and sociology of these science and technology specializations as well as for social content of the stand of the stand

# ع الرح R

The overall Master Plan for the Jeddah campus envisages a University City with a population of over 40,000

The long-term planning and design of King Abdul Aziz University has for the past five years occupied a large, multi-disciplinary team, including planners, mbin designers, architects, engineers, landscupe architects, engineers, landscupe architects and educational planners as well as international experts in Latterly, an Executive Committee of the Higher Council of the noiversity

the Higher Council of the haire Car-has taken over special responsibility for the Master Plan. A 100-strong team is engaged full-time in the United Kingdom, North America and Saudi Arabia in the planding and design of the maiver-sity, which will be one of the world's major construction projects. The team will graw to over 300 os detalled design of buildings reaches foll mamorium within the next year. Experie from the United States, Conada, Britain, France, Turkey, Egypt, Jordan and Moracco have

been consulted, During the planning period the During the planning period the sizo of the university has had to be increased several times, partly due to the ever-improving and expanding secondary education in the country which will be leading to greatly increased demand for higher education. This, together with site ocquisition, problems, was one main reason for the long gestation period.

reason far the long gestation period.
Underlying all thinking, however,
was the desire of the university
leoders to spare no effort to create
a losting symbol and visual expression of its purpose which the islocular
world could have to with pride. The warld could look to with pride. The modern industrialized society, built on the foundation of the Islamic faith, is the task facing those who will be educated in the

while the long-radge plans were made preparation the demands in said of the men's compass them existing facilities were growing at an alterning rule. In permit the attention of the men's compass them the proper long-term development of the Jeddah site, a temporary campus, using pre-fabricated huildings have designed and exected, but the long temporary constitute the long temporary can be attended to the men's compass them to the long temporary can be attended to the men's compass them to the long temporary can be attended to the long temporary can be atten

university began in 1972 when Project Planning Associates of Taronno, a Canadian muki-discription any consulting first, was retained to prepare a Comprehensive Campus Devalopment Plan, Site Investigation and First Stage Campanent (Buildings and Engineering) for the mon's campus. The first stage was then to develop and ogree upon a complete education programme from which space requirements could be derived. The site cay eved an area of about 80 hectares at that thou.

The Master Plan for the likely development over the next 15 to 20 of years. The area covered by the plan is to complete sectar uf the city of Jeddoh dofined by majar raade and bounded in the east by the Jeddoh bounded in the east by the east the city within the city of the land of the east by the link of the land of the land of the land of the land

F

recessive small. Around the same time the Master Plan for the city of Jeddah, indicating proposed long-term relationships between the university site and the future city growth pattern, was presented by a firm of British consultants.

The university called on the con-sultants to prepare five different

sultants to prepare five different schematic approaches to the design of the men's compans, all to be based on the principles established in the preliminary Master Plan, and two approaches to the design of student and family hoasing.

Schematics one to live trere submitted in January, 1975, together with the Moster Plan report. It was the original intantion that one of the schematics would form the hasis of detailed design of buildings. However, studies had indicated that the mirrersity had again to expand and consequently the site had ulso to be enlarged. The unihad also to be enlarged. The mi-versity then requested a sixth schematic, incorporating both the expanded space requirements and various elements of the previous

live schematics. In December, 1975, the proposed schematic six plans and new Master Plan were completed. Ahornative solutions regarding key clonients of the plan were explored, including a relocation of the reaching hospital, the complete idiginates of the central spine of the men's campus towards Mecca, rearrangement of the entrance plaza and a dew roud layont. Plan revisions were begin and site boundories were again modified when it became clear that certain land to the north could not be obtained but that land in the

present uirport zone to the west would become urailable. In March, 1976, the comprehen-sire Muster Plan for the university and schematic six for the men's compus were presented in Jediah and approved by the university. The presentation included a huge oundel of the projected University City on a site envering over 900 hectares, of which 6811 would be developed by the university. Design of buildnew university. Design of build-While the tang-range plans were ings and engineering for the first

pus, using pre-fabricated huildings less been designed and erected, but carefully integrated with the long-range plan.

During the past year, about 100,000 square metres of new temporary floor space has been added, complete with mosque, a 280-bed hospital, classrooms and stuff hausting. Those facilities stand on the site of future institutions and housing planned far later expansion ranges.

The long-term planning af the university less out the edge of the coastal plain, with a backdrap of rugged hills in the east. Together with the climate, which is extremely hot and hundle have some special problems such us blow-ling and, it provides mader constituted in the summer netaths and hundle some special problems such us blow-ling and, it provides mader constituted in the summer netaths and hundle some special problems such us blow-ling and, it provides the likely of development over the next 15 to 20 years. The area covered by the plan

at that thou.

The proliminary Moster Pian was submitted to the indiversity in July, 1974, and was roviewed with the help of a panel of university expended as a panel of university expended to the indiversity expended as a panel of university expended as a continuation westwards of the university. Column

facilities open to the public at Daiversity Place, the main entrance area. The entire University City and and pedestrian network has in rest to cust orientation directly towards Mecca, with the main spine through the men's campus and the health sciences centre aligned pre-cisely on the Huly Ka'ha. The potential resident population

The potential resident population of the University City when fully developed is 41,000 with a duily continuing population estimated at 26,000. Aliam 18,600 of this popula-tion will be the statletts in the rarious campos areas.

There are three major compon-

ents of the university, the men's cumpus, the he, lth sciences centre cumpus, the neutric sciences centre and the wamen's campus. The orcu's campus will consist of a series of integrated buildings for faculties, classrooms, between theatres and special facilities with a present that genes floor space of about 500,000 square motion. This box Still 100 square metres. This, horever, is likely to expand considerably. The buildings will lie in a pealestrian precinct within an innering road and an either side of a main content.

The men's campus will eventually necommodate about 12,200 students in the faculties of science una engineering, arts, eronomics and business administration, human kinetics, the busingte of Applied Geology and the School of Environ-

congressing the School of Environ-mental Design.

The spine will emisse of varying size of related spaces of varying size mud scale interspersed by the onajor buildings for general inviversity use —the library, for over 750,000 volumes, in stage one, the student centre, with dining facilities, and the gramasium. The spine will form the gromasiom. The spine will form a pedestrian route, partly apen, partly covered, and will enqueet to the entrance aren la the west mid in the open space system in the residential community cust of the men's compus.

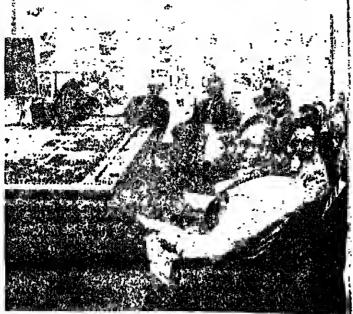
men's compus.

The entrance area, ar University Pluce, will be the "front window" of the university to the city and the warld, and will entmeet the health services centre with the men's compus. It will contain the Friday Alosane at the fowal point of the spine, the university odministration building, the auditarium and planofarhum. Alsu an University Ploce will be the nutseaum and art gullery and aquarium. The extreme importance of the design of the outrance area in conveying the image of the university is recognized by all. A team of outstanding architects has been ossembled to carry out the work under the leadership of Professor Pletra Balluschi, of Portland, Oregon, and the Project Plonning Coardination Team.

The health sciences cantre is

The health sciences cantre is incated along the spine immediately wort of the University Place. It will cantain the frenties of medicine, dentistry, nursing, pharmacy and allied health. At the western and of the spine there will he a tenching hospital with 800 bods and pravision acrosby for a second tenship. A particular design constraint fueed by the planners and designers of the health sciences centre is the separation of men and wamen. A total student envolvement of 3,700 is being provided for and there will he special housing for key hospital stoff.

The women's campus will lia south of the houlth salences centre in the southwest carnor at the University City. There will be separate hausing far female students south of the campus. Educa-



domes and evelos, the delimetrail, the interplay of light adds

und the spaces and parden du Islam? How will the designers

schematic six and derived has a portions found in building and the Islamic world from the Marine in Spain to Islaha h for The ured to provide shade and amail emrlyards height forces and greenery is recognized.

florers and greenery is recom-and hocal materials such as so and tile can be used judicious. The height of buildings say limited, there will be an increa-concentration of facilities and and thus sping one will experience.

Jeddah. The litts test statement housing. Since April 1978 were accounted an the detailed design of the first 3,000 units design for the statement housing and 400 units faculty and staff housing the designs for these forms unit of the main men's common and the main and the main

the spine ous will expe

tional programming for the wanten's The current major ud ,

tional programming for the witner's campas, with a maximum enralment of up to 0.000 students, is about to stort. The Master Plan for the ryonen's compus has yet to be prepared. There is a temporary witner's campas with a large new indition to cope with a rapidly increasing enralment.

On the eastern side of the university, ranging from ourth to south, will be a large sparts stadium (the first stage is to be designed for 10,100 spectaturs) and pluying fields. A number of special-nee building such as the media centre, the 6 million gallon water storage reservoirs and pumping station and the central milities plant will be appeared to bowing energy of the first stage is to be designed for mattern teaching medial must be resistant to bowing energy of the first stage is to be designed for mattern teaching medial must be resistant to bowing energy of the first stage is to be designed for mattern teaching medial must be resistant to bowing energy of the first stage is to be designed for mattern teaching medial must be resistant to be supported to the control of t the central milities plant will be increase are the playing fields and the southern boundary. These areas are to be specially landscaped. These areas are to be specially landscaped.

The site of the temporary compus facilities in use at the moment will erentually contain special resemply

erentually contain special research lossitutions, new faculties and additional student limiting.

The Jeddah chimate necessitates the air-conditioning of large spaces in all of the campus areas and main buildings. A central utilities plant library with the haiding of a molecular proposed which will supply clubbed water during a sorvice tunned system. The plant will be one of the world's largest, with a series of confing lowers and exhaust stacks offering a unique challenger. stacks offering a unlique challenger to the ungineering and architectural

to the improvering and arringering team responsible for the dastga.

Energy conservation even in objective both of the design of this plant and the buildings to be cooled. A deliberate aim of the origineering programma is conservation. Waste programma is conservation. water from the university's own the south-east corner of the site will he used in the cooling tower of the utilities plant and for jerigation of

the south-cast corner of the sate will be used in the cooling tower of the utilities plant and for icrigation of planted accus.

The residential communities proposed for the housing of faculty and staff members and enviloyees of the university are ducated on the eastern and northern sides of the campus areas. They will contain o range of housing, primarily in law-risa types, including villus, linked hames and apartments clustered around schools, local shops and on open space system.

Each community will have a centre and each neighbourhood will huve a masquo. There will be walk ways linking the key facililes and context. Sing Abdulish ways linking the key facililes are in the space of an indicate on the visual qualifier.

clustered around schools, local shops and an open space system.

Eoch community will have a centre and anch neighbourhood will huye a masquo. There will be walk ways linking the key facilities nod careful use will be enade of hard and soft landscoping. The communicate will be built and administred by the university. About 5,100 hunsing units are prapared. The south-east community, the first reas to be built, will contain shout \$1,000 thicks when fally developed.

Show this wife fully developed.

The fearspoor system is designed for matter vehicles, which are increasing at a tremoudous rote in ladden and all major cities in the kingdam, and for a University Ciry bus tonte network Protein is also made in the Master Plon for an automated fail transit system through the University Ciry bus tonte network Protein is also made in the Master Plon for an automated fail transit system through the University Ciry Farking far ovor 1,000 cars will be ideated budge the mebric campia fail transit system through the metric of the constructions are as Pedestrian routes will be separated and linked aver the roads to the campus area, Pedestrian routes will be separated and linked aver the roads to the campus area, from the student and community harring in the oetwork is pleased so that soine of the orterials will have more than of the orterials will have more than of the motor vehicle:

A hierarchy of arteriul, callector and lacal roads is proposed, but the oetwork is pleased so that soine is the short mage of the orterials will have more than of the orterials will have more than of the motor vehicle:

A hierarchy of arteriul, callector and lacal roads is proposed, but the oetwork is pleased so that soine is the short mage of the orterials will have more than of the motor vehicle:

A hierarchy of arteriul, callector and lacal roads is proposed but the oetwork is pleased so that soine is the short mage of the orterials will have more than of the motor vehicle.

Medical emphasis on prevention

The first hanch of graduates from the faculty of medicine and utiled subjects as sociology, indumination, take students from this acodemic states at King Abdul Aziz patient teaching, health screening year. the faculty is a sure work in the loopinals and clinics of Sandi the loopinals and epidemiology. Students are given full opportunity in study first-hand the problems of people in the community as early in their cureers as possible.

The underlying emphasis in all the medical training programmes of the faculty is an indigenous requirements. Influenza, antoebinasis, malaria, tuberculosis and oteales are all prevalent in the kingdom, are all prevalent in the kingdom, are all prevalent in the kingdom.

are all prevalent in the Kingdom. Accidental trauma is one of the major causes of death. Injury and incidences of trauma me growing at an alarming rate. The inculty's courses therefore may particular alteotion to the study of these

Aunther health problem concerns
the Hali, The nearly two million the Haji. The nearly two million pilgrims who come every year to Meccs and Meditina creata orultidimensional health hazavds. As such, tha Ilajj has had a amjor impact on the faculty's medical and health services programores.

terrices programmes.

In the development of the faculty, blind duplication of foreign models has been avolded. Howover, this has ta say that the experience and knowledge gained fram foreign models has not been used. Over 30 different universities and medical the throughout the model. centres throughout the world were consulted about their medical syllabuses in the initial stogas uf the faculty's planuting. An advisory board of representatives from such medical colleges as Riyadh, Molay-de, Shiraz, Turbey, Leeds Univer-siy, Manchestar University and John Hopkins University has

guided the design of the curricultum. "This curriculum", snys Dr Abdulish Basalumah, dean af the faculty, "entalts a great compliants oo community and prevenintire medicine, but it also includes an integrated opproach to medical sindents to continue their studies in medical colleges abroad."

The faculty's Department of Community and Preventative Medi-

ferreil, by arrangement, from the University of Riyadh, while others weer called back from the Univer-

tional 40 onala students were admitted to the second year of the

The faculty has now mored into a new purpose-binh building, equipped with some of the most modern medical laboratories in Sandi Arabia. A 340-bed university hospital is almost ready. A permanent medical centre will be completed within a year. The next sever medical centre to Include schools

Rapid though these developments are, they still fall far short of meeting the increasing medical needs of the country.

The Second Development Plan calls for 4,000 doctors. There are now about 400 Saudi medical ductors in the country. At present, only 9 per cent of all health persuncel within the Ministry of Health are Saudis. The vacancy rate is more than 28 per cent for health persuance at the country of the second country positions. It is estimated that there will be 14,000 such positions during the current Fiva Year Plan. The importance of non-Saudi doctors will therefore cantinue for smoe

The greatest current health requirement of Saudi Arabia appears to be the gathering and colluting af lafarmatian about the health of the people. Public health management without the knowledge of the real needs of the community is wasteful and, indeed, sometimes dangerous. One of the mast challenging increalists leaks is to convert a system of aral communication of family relationships to a system of documents. nf aral communication of facility relationships to a system of documented records at births, tleaths and disabilities. The establishment of a regular demographic ceosus it o prerequisite for this task.

The major emphasis of medical and health training in the coming decades will be on preventative health rather than cyrodve health. Enviranmental health, marrition, hygiene and safety programmes will slty af Caira.
Environmental health, mutition, hygiene and safety programmes will ligher Nursing was established.
The curriculum far the college two designed by Dr. Samira Islam, who heads the women's section of the meet this challenge.

Journal of Arid Environments

This important new journal will provide a forum for original scientific and technical research work and reviews, concerned with the problems of desert environments. It will contain book raviews, technical notas and short communications, so maintaining a broad viaw. Such a multidisciplinary and interdisciplinary approach will be of immense value to administrators and governmental officials working in arid lands throughout tha world. It will also be essential reading and a means of communication for research workers in biology, ecology, agricultural science and husbandry, concerned with resaarch on arid environments.

The major problems lacing the inhabitants of the world's desarts are accid-economic rather than scientific. Thus the journal will include articlea on sociological and anthropological aspects. Often, the problema result from increasing population, overgrazing by domestic animals, drought and soil erosion. Although science may suggest strategies for development, administrators often hava tille acceas to the knowledge available. By prasenting both accepted and controversial ideas, this journal will provide administrators with guidanca and firmly asiablished sciantific facts, on which to base their deci-

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Associate Editor : Anna Cloudsley

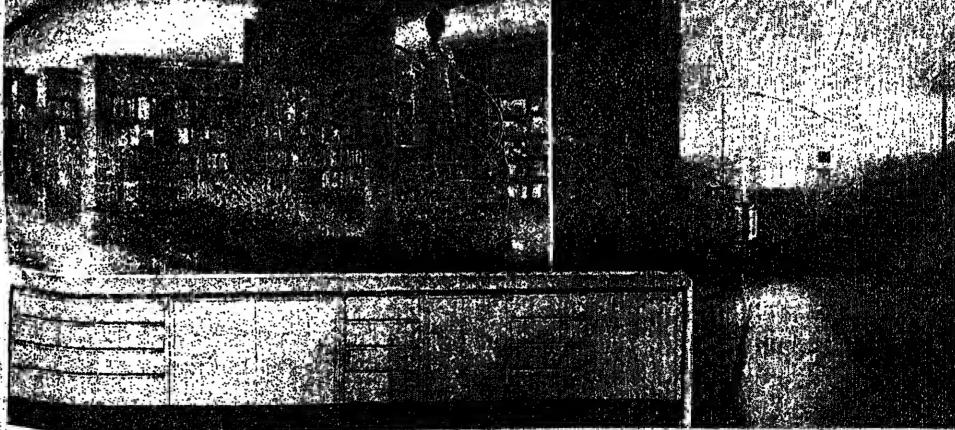
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### **Academic Press**

London New York San Francisco A Subsidiary of Harcourt Brace Jovanovich, Publishers 24-28 Oval Road, London NW1, England, 111 Filih Avanue, Naw Yark, NY 10003, USA.



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Paul Moorman on the lot of the expatriate in Jeddah

# Either you like it or learn to lump it gracefully'

"Rejaire, Khalil!" quark my vafiks.
"for from the next have we will show thee Jibha."—I beheld then the white sen indeed gleathing for maker the sen indeed gleathing for maker the sen indeed gleathing for maker the sen indeed ships roking, and minarets of the tower. My continuate minarets of the tower. My continuate banked that I should make jubilee. Charles Doughto, Travels in Arabia Deserra, London 1888.

Inhilee is not what the madeen twiveller from the west usually makes when he jets into the steamy heat of jeddah, the country's diplomatic and commorcial capital. In is too hat and noisy and frencie to do more than work one's way slowly drough the day's lusiness.

The huntidity — compared with such nearby mountain resorts as Tail or even the capital Riyadh in the heart of the Nejd desert—is extremely high; and temperatures are over 100" for much of the year.

Pullution doesn't help. Most hedowins have long since traded in

hedovius have long since traded in their camels for free trucks from Government. For the mrbad Sandls, the car scents to have sup-planted legs as the natural means of getting around. There is no public transport in Jeddah; fleets of taxia, many run on o secondjob basis, roam the streets: women, even foreign women, ore forbidden to drive cars, so this further swells the demond.
Cor-driving Jeddoh-style is to leav

Condriving Jedduli-style is to team on your hum (steering wheels are equipped with two or three houter humans) and put your fact dawn.

Traffic lights are often reinforced by ridges in the road so that the drivers, while still larguly ignoring the signals, at least have to slaw down.

It is the endless jams, plus the fact that the turn of the conditions of the fact that must be understood strictly in Saudi Arabian fact that they driver injuring unverse the times there are western.

consequence.
Change is everywhere: Indidings spring up clamst avernight; harely for the super-salesmon of the west sprout, whole suites hooked un a permanent hasis by the multi-nationals before the first slower are luid. Waste is unimportant; cur ints models—inmorrow's designs, mastly Japanese, stand in gleaming convito he sumpled up and used up within year.

within a year.

Yet this chaotic transformation is taking place against the hackground of the most conservative and puritanical ecciety in the Musium world.

Alcohol really is forbidden. Expartiate accdemics at King Abdul Aziz University tell of grend schemes to sinuggle in home browing kits under the guice of medicine or to moke wine from grape juice and yeast or to track down a £50 black market bottle of Scotch in the conk. But the vast majority soon give up and learn to



"Jeddah champagne"—upple juice with Perrier water to give it

very difficult to come by. Women in Soudi Arabia con only work in in Soudi Arabia con only work in jobs where they do not conto into contact with men: this virtually means teaching in girls' schools and being a doctor. Wanten's shops, for example, are staffed entirely by

fact that my driver injuring my terms: it mems there are western style restaurants, a beach for swing cially cripiding "blood money" in compensation, which help keeps the accident rate down.

Things are not much better in the six bleicanters which the authorities for the mist part turn a blind eye to, otherwise the ancient Muslim cultifications which the mist part turn a blind eye to.

into the Red Sea randsteads where the cargo boats at times got stack for weeks in the congestion. They are ferrying back lags of cement the frantic construction programme must go mi; muncy is af an consequence.

Change is everywhere; indidings spring up clamst averagit; lagels for the super-salesmon of the vest sprout, whole suites hooked un a permanent basis by the multi-bring is livestern technology will inevitably bring is livestern values.

the control of its community or give the community of the commu CE ASSESSMENT

re less than a generation way from bedouth nomuds and more than would care to admit ore still more at home in a tent then a concrete bouse. Neither viewpoint is like a appeal to the sophistend to the sophistend by vard or Minist Two decades ago this was, educe-donally, almost a blank sheet of Saudis ranging the country Riyadh or to their straight powered American advisor.

Riyadh or to their struggle powered American adviser.

Such considerations, however, it not often balk large in the site of the stream of apparite an denties, who have come to work a decaded, the a secondary and King Aldul Aziz University, Man, ure there simply for the mong they ure campus mercanies. But they are campus mercanies. But they are campus mercanies. But they are campus mercanies and the university has the process. Organized the university has the structure of the work of the Western and the university has the structure of the work of the work

Top of the pyramid comes first

The strict view of Islam held to expenditure and it is intended to increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure by 1980. The increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is intended to increase this to 25 per cent of Government expenditure and it is in

been developed

Egypulaas and Palestinlans, ton).

Morenver, the Egypulans, in particular, have altsurbed via their teacher training colleges and universities. Western concepts and unitudes. For example, art teachers in the schools go for the kind of representational art which is not unfamiliar in the schools of England. This is not to say that support—they are certainly less than the 7 million in the reformade up of stony, scrubby desert made up of stony as the most part the neopio trid. For the most part the neopio trid. For the most part the neopio draw o mide.

At present they provide a three-year course, thin the college of education for girls in Riyadh is expected to gain university states. And, of course, an education

draw o mide.

Other Muslims from the Middle
East must also find it difficult to
share the Islande insistence on the separation of women, just as more and more of the younger Seudis

But the separation is in practice so complete that girl students in universities cannot be taught by men, except via closed circuit television. Despite this, girls consistently accupy the leading pieces in examination results in King Abdul Aziz University in Jeddah, for example. The sad truth is that there are inge untapped reserves of intelligence among Sandi women.

Professionally, women graduates

Nonetheless, the Saids press on with the expansion of girls' calucation and it follows the same pattern as that for boys. It is the same pattern as that for boys. It is the same pattern in the fact, that is general in life Militile East. Primary or clometrary echools from two age of six to 11, intermediate from 12 to 14 and secondary from 14 to 18. In 1974-75 there were some 200,000 girls in primary schools and 400,000 boys. By 1979-80 the figures will have increesed respectively to 350,000 and 700,000. Clearly it is proving more difficult to expand girls' education than boys.

Much the same petrarn emerges

Egypt, a further 6,000 are for an ligher education, is taking some dantons and there are some 2,500 to 12.6 per cent of Government expenditure and it is intended to

teresting transition since he is not English-squaking and he is a particularly zealous Mualim. The mun who has recently been made Minister of Education is very different—the former vice-chancellor of Riyadh University and a greduate of London University School of Oriental and African Studies, Dr. Abdul. Azia akknwaiter.

university students—an increase of 4,000 mi the provious year. Of the totel, rather more than 16,000 were asen and 3,000 woosen. In 1974-75 there were 1,741 university teachers, which gives a staff-student ratio overall of about one to 11.

the others are, needless to soy, also expanding rapidly. Enrolment of Riyadh University increased by 17 per cent on the previous year in 1975-76, and totaled some 8,000. Three more faculties are being added there in voterinary needleing.

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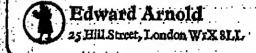
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# Books: something that money can't buy

Dr Mumtaz Anwar, chief librarian et King Abdul Aziz University, hes e problem which, on the face of lt, his counterparts in Britein would be only too ploased to shere: his difficulty is not shortage of money, but how to spend it. Dr Mumtsz ls hazy about exactly how big his budget allocation is-for the simple

overnight a comprehensive stock of unt-of-print banks—one of the key mecessities in building a library virtually from scratch. Established libraries simply do not in the normal run have the facilities to drope everything and microfilm o thousand volumes. But that is the kind of scale of operation that Dr Anwar is thinking of.

The university of the produce of the scale of the sca

The university is new trying to arronge special deals to get uround this problem with such libraries os the Library of Congress, Harvard, Cornell, Columbia, the British Library, Oxford and Combridge,

At the same time it is joining the United States Universal Soriels and Book Exchenge, a kind of swap club for discarded books. But even here it took six months to get the formalities out of the way.

gst the formalities out of the way.

Another difficulty is a shortage of skilled staff, particularly in the library's acquisitions sections. There have only been 20,000 purchases this year, far fewer than the university would have liked.

Binding problems are enother headache for the library. Seventy per cent of its periodicals are having to be stored unbound. At present the library takes 2,100 titles a year and would like to double this; but the lack of binders is holding back development.

One thing the library is not bear

One thing the library is not having to worry about from this month is shortege of room. It has moved out of its provious cramped quarters into a two-storey building with a floor space of 8,200 square metres.

Like every of the other new build-ines soles up on eig campus, this burney is being buile with a 10-see

life are view. Its planned captainty is half a militon voluntees at mission voluntees. A feature of the building is a row of 32 month-like "petite" on the second floor where students doing long-term projects can leave their books and papers. Each criticle is completely self-contained.

With punishments for steering discounts under Islamic faw public amputation of a hand being the most spectacular Koranic determination of the hand being the most spectacular Koranic determination of the hand being the mission of the might expectately be the first the contract of the contract o

budget allocation is—for the simple reason that he has never really hed to find out.

His problems are real, however. Since coming to the university earlier this year front the University of the Punjab Library in Since consideration of the University of the Punjab Library in Special provisions have also been made for the structly segregated girls college to have its own library.

Mixing of the sexes outside the family is forbidden and, like every other institution on the campus, the library is "men only".

varsity of the Puniab Library in Lahoro In Pakisten, ho has come to realise thet, although money helps, there are many things it cannot buy. It cannot, for example, produce overnight a comprehensive stock of uni-of-print banks—one of the key necessities in building a library virtually from scautch. Established libraries simply do not in the normal run thus the facilities of discount for about 7 per cent of the sular natural and making these components are these components and making these components are these components and making there will Inevitably be much the contract the particular and the particular and the components are the components and making there will Inevitably be much the components and making there will Inevitably be much the contract the particular and the components and making there will Inevitably be much the components and making there will Inevitably be much the components and making there will Inevitably be much the components and making the component

Dr Anwar remains confident that or every, engineering with a or eight". He says that the gigantic administrative problems besetting every sector of the university arise not from hureautratic heartings.

In addition to these counce, it family impose to fully operations, the School of Architecture, one ally established on independent lines, the school was keer being porated into the faculty of countrius. The school offers three departments or chilecture, in scape exclutecture and order in the faculty of countrius. The first batch of studenting. The first batch of studenting inst finished the preparatory year. Ho sayst "The Soudis are pushing distory. I may be tald: 'Wu are starting o new Master's programme next month. Get the backs.' Well, I will get them and there will be o prugramme."

not from hireameratic hiertimin-ing from the scale and speed of the developments which are taking

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### cream off the best The fuculty of engineering-at celebrates its second and this manth-offers s the

above 80 per cent in their secschool examinations are tone Ench student is interview. examined, particularly for E ninud of English. Some studgiven a preparatory year atthem up to on acceptable sie

Curricula nue planned mi students can freely charge on up to the end of the like During the first two years have As information scientist conflig graduotes do almost the seem to work la Saadi Arubia for the Thorough training is profile first time soon discovers that he is the basic sciences of phace in the basic sciences of phace in the professional subjection of the professional subjection of branches of expanding the profession begins in the kernal professional fifth years. The faculty potential that this presented will profession to combination of fundamental stiffic training with a second professional states. working io a uidque eavironment. Nowhere elsa in the world is the rote of development so fost: rouds, tower blocks, technological hardware of all sorts emerge virtually overnight. Yet at the some time the country los its roots deep in the culture of Islam: all human activities, at least on the surface, are guided and steered by this relationship. tific training with a best but

programme.

All students must rake torse on Islamic studies, Archit lines und humanisies. If geresser, to gion. Islam permeates all social as well as political intercuurse. The information scientist has to have to attend the British Come Communication Skills in Eq. Nork within the framowurk of these lace. Although he has to help acudemics, researchers and decision-makers guide the society to higher The faculty's engineering grammes are taught as one jects". "engiacering majors" free electives". By coording

The work of an information scientist in a rapidly developing country is many-sided

THE TIMES HIGHER EBUCATION SUPPLEMENT 21.10.77

All things to all men

unlogy Group?

The information scientist with a background in the scholarship of science has no difficulty in differentiating between "hord" and "enlightened" information. Tho "hard" describes only the technology without only consideration uf its social and environmental couseinformation which is culturally and environmentally suitable.

ups by laformotion systems evalved to accet their specific needs. Although unleading to put up on not have bused to serve the future research needs of these faculties.

There is, secondly, a desperate need to develop channels of information (hard as well as callightened) for the decision-nokers of KAAU.

There ore abvious problems in aintiffancously planning, building

information which is culturally and environmentally suitable.

At King Abdul Aziz University there is an acute need to develop channels of enlightened information has a habit of getting to the client first, Perhaps because it is backed by super-sales men eager to soll off-the-shelf, out-of-place and quite often obsulete hardware. Enlightened information has no such proponents. And it

ky Zianddin Sardar

pown the streen from my flat in jeddah sits an old man; he is there plex brew the need for correct, accumpled and all. He listens to unyone who wants for talk to him. He effers endless cups of ten and bits of information for small bits of information the "latest" information scientist.

Consider the "latest" information as society where it is not easy to say "no", one accepts the role that is appended, it is also tone that there is little of each in every kind of information would best serve its needs?

Consider the "latest" information scientist.

offers endless cups of ten and bits of farmation fur small bits of faformation fur small bits of cash. The information the old man smalles is of particular interest to busters of precious flots and, in a country were all marriages are arranged, to prospective suitors. Here, then, is the oldest information broker in business.

Tradicional Sundi Arabia needs people like the old man. The newer, more dynamic sectors of the society, forester, require a more suphisticated kind of professional.

Serve is needs?

Cousider the "latest" information and the information until the functional role of the information of the information until the university of Stanford or Harvard (as it host) or head coan from Architecture and vard (as it host) or head coan from Architecture and the university R & D department. KAAU has three centres of ourstanding reputations the information until the university R & D department of Environments. Enter the information of ourstanding reputations cientist.

There is the traditional role of the information until the university R & D department of Environments. KAAU has three centres of ourstanding reputations cientist.

There is the traditional role of the information of interments. KAAU has three centres of ourstanding reputations cientist.

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needs of these foculries.

There is, secondly, a desperate need to develop channels of information (hard as well as eallghtened) for the decisian-mokers of KAAU. There ore abvious problems in aintulianeously planning, building ond running o university. The information scientist is needed to evaluate proposals, to provide laformation back-up to plenning meetings, to abstroct lengthy reports and documents, to lep expertise from outsiders, to -- the job descriptions are endless.

lronicelly, the two most common enquiries have little to do with information science as such. "Do you know eaviling about perfunes?" "Could you write the rest of my thesis?" Yes, on both counts. But, surely, I ought to be doing something else. lardware. Enlightened information has no such proposents. And it becauses the responsibility of the lardware its enlightened of organization, he has also to help that society preserve its enlightened information science as such. "Do you help that society preserve its enlightened information science as such." "Do you have been divided and science as such. "Do you know only ling about perfumes?" "Could you write the rest of my its no real owareness among potential users of what information science as such. "Do you know only ling about perfumes?" "Could you write the rest of my its no real owareness among potential users of what information science as such. "Do you know only ling about perfumes?" "Could you write the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the rest of my its no real owareness among potential users of what information science as such. "Do you with the such informati

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# Digital equipment participates in Middle East education growth

Computers, main brano, minis and the intest offsprings microcomputers have find troppendous influence on the development of Western Inclinately and methods in a white variety of areas ranging from weather forecasting, applications in commence and in particular administration. This influence has kneedy append to the Middle Fast and fe being tell increasingly in current technical developments like Oights Equipment Corporation of Massachusaette have been one of the policipmits in these developments. Since the day when they harded it with three men in 5.500 on it of secommodation manufacturing legic modules, they have

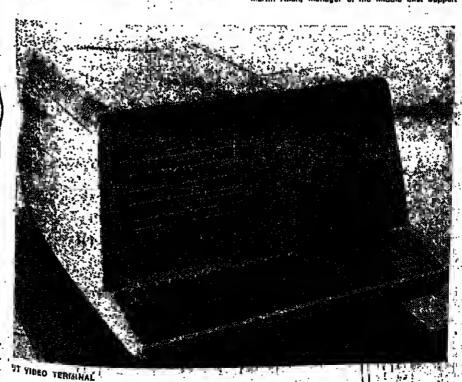
menta of with three mon in 8,500 og it el accom-modellon menufecturing bogle modules, intoy have not locked back. Now their sales, en colobretion of their twentiath analysessay topped one bittlen dollars and their computers are sold everywhere in the world.

President Ken Clean, one of the three men, said discussing the background of the company: "We believed then and we still do thet computer should be understandable, approachable and alfordable, and topicsent good quality which is

to the Middin East, Oightal acutement is facing a market which it conquered in the West back in 1962 by producing the POP-5. "The world's lirst minicomputer". A 12 bit machine coeling under 39,999 deliers, it put computational power in the hands of those who proviously could not alter at 11. Coveleged that the POP-9, it became the workhotes of the scientific and angineering community who discovered that minicomputer systems.

man larger systems.

The POP range of minicomputers is currently installed in sayeral countries in the Middle East. Most widely lound are the versatile POP-11 temity which embraces models like the 16 bit LSI-11 microcomputer on a board and the fast powerful inviti-user POP-11/7P that allows multi-function, multi-language time sharing, rost lines and balab multi-language time sharing, rosi lime and batch processing. The LSI-II is extremely small in size but has over IP limes the calculating power of Massachusealist institute of Technology's "Whirlwind", the tather of the minicomputer.



tha oil wealth to produce an explosion of appliestions.

Ho edded that the process of eveletionary development which had taken 20 years in the Western Wolld, lirsty to medium size computers. Itan mini-omputers and microcomputers was taking piece lan tiness as test in the Middle East. Olgital Equipment's impact in the Middle East hes been in the areas of telecommunications, medical laboratories and in aducation where they have ever 150 installations and part in the servicing support offered by the company is besed in the lay later than the entitle of the part of the following adults and support offered by the company is very coullous elouing support where a servicing base is not avoidable. If it does so, it will strongly recommend that the institution or organization purchases appears.

Most of the countries mentioned operate either PDP-8 or POP-11 minicomputers, but the pride eleptace says Olgital Equipment goes to the installation of a PDP-1177 in the Xing Abdat Aziz University. In Jedden, Saud Arable, at a cost of the says of the population.

Goesse of this outperfation of the administration of the population.

to provide densitid to the administration ause of this automation of the administration ause of this automation of the administration ause of this automatic areas was established as e major according to the polytope of the projects. Other according

ihe modical support for teaching in all colleges and much more.

Mr. Allen believes theil there is graef scope for lurities developments of title kind, in an area like educellifon with rivich Oldiel Equipment is so directly and predeminantly involved in the Middle East. He believes in an improved diologue botween user and manufecturer, especially in education and in the demonstration of a ganutino interest in the problems and needs of the Middle East countries and how computer applications may help solve lites problems.

For example in Egypl at the Acedamy of Botances, a large POP-II/35 system, costing around 200,000 dollers, is boing head to energy peophysical date is a progremme to mop end axplore the Western Ocean.

is a programme to map and explore the Western Ceseri.

Geith the American University of Calic and the Alexandric University have PDF11-/4P based equation systems, one being used for Fortes end Sesie lenguage instruction, the other on RT-11 based system for computer belonce and computer lenguage instruction which has the double advantage of being each by either laculities of the university.

inge et being each by einer iscullies of the university.

A similar system using e PDP-11/34; costing lose than 9P.000 dollers will be installed et Halwigan University where it will be used to teach gompuler solence end elso eerys es e service burser to the raci of the enteretily. Yet enother POP-11/44 will, be lidsfalled at the harb University of Behut. In this case e depondence onnitgeration costing opproximately 200,000 dollars including spare parts was purphysed by the university since the dollars was purphysed by the university since the dollars including spare parts was purphysed by the university since the dollars including spare parts. Was purphysed by the service.

The Directorate General for Mineral Resources (OCMR) In Jeddait, Soudi Arable and the Ministry of Pleaning and Colestitio Research, Surveying Department, Libya both use the POP-11/45 for studying mineral resources and mapping. The OOMR else can two isboratory systems using a POP-8/M and POP-11/95 respectively.

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THE TIMES HIGHER EDUCATION SUPPLEMENT 2147 new from || KAAU: from private college to university city

> sure by a group of leading funtilies in the wastern provides headed by in the western province headed by Sheikh Ahmod Salah Junijoon, a leddah businessuon who is still Intimately connected with its

late King Folsal and with a gift of hand from the Jeddah manicipality, the university was funded urirately in its early days. The central government took over responsibility for the hargeoning Institution in 1971

It began with a faculty of econnules and administration and an enrolment of 60 men and 30 women students. There were eight fulltime oud four part-time academic suff. A faculty of orts opened the following year and 29 stodents were sent abroad for pastgraduate training to provide the nucleus of the Sandi teaching staff of the future. This practice still continues. The then available. The library num-bered 15,100 books.

Tuday, King Abdul Aziz consists of five faculties at Jeddah und a flourishing two faculty Meecn campus; it is also developing a Medina branch. The new faculties are science, engagering and medicine. Meeca teaches education and Islamic law. There are 4,000 plus male students in Jeddah and more than J,000 in Meeca.

In midition, Jerhiah has three specialist institutes, the Institute of Applied Godogy, the Haij Research Centre and the Centre for Research and Development. At Mecca there is the Arab Language Institute.

As is cusininary throughout Satuli society the seves are kept strictly apart. No male students or staff are allowed into the girls college on the Jeddah compus.

Here muce than 2,000 girls study in a dozen departments ranging from Arabic and Islandr studies to from Arabic and Islamic studies to public and business administration, psychology, biology, natural sciences and medicine. The teacher training college is at Merca. The vast majority of the female graduates will either teach or become ductors or muses.

The college is almost entirely residential and the amusphere of lemning is strong. Girls habitually lemining Is strong. Girls habitually till many of the mp places in finals exams. Tultion, howks and occuramination ore oll free. Lectures are given by female condendes where possible; inhertyise the girls fullow lectures by males on closed circuit television screens. circuit televisium screens.

Fry education is haing developed

King Abilul Aziz University came which runs from 1975-80. Work

porary buildings cuminine to shoot up oil the time.

A million prounds here or half a million there for a structure which will be pulled down in 10 years may sound a lot; but it must be seen in the context of, for example, a budget this year of £120m.

Next year's hadget will be £140m and the total allocation to King Abdul Aziz aver 1975-80 will be early £550m. During that period student numbers are due to rise

Sheikh Jsmjuon is keenly concerned about the preservation of quality during expansion. He is in-sistent that the flood of students and staff into the university should not writer down the ideals of academic The university is alming in ensure

undergrailunte excellence by hiving down tight entry qualifications, especially in needleing and engineer-Sandi teaching staff of the future.

This practice still continues. The aniversity occupied 5,000 square metres of the 750,000 square metres then available. The library miniwestern papers, are being recruited in large numbers from Europe and North America: saluries are high and this is reflected in the quality

Sheikh Jaorjoom puts it thus:
"God created the world in six days:
He could have done it in a minute,
the took his time, and so must are. and not neglecting quality."

Time, however, Is the must pro-cious commodity in Sundi Arabia, Prosperity through affversification before the all runs out is the aim. Highly-trained Sandls are an essen-tial imposition of a lasting successtial ingrediem of a lasting successful future for the country.

Naveff, 16 Zuliear, a distinguished Island, economist who has a doc-torate from Lolester University, has kept a close check on the deve-liquient of the Master Plan, proferring to get it right rather than

The amphasizes, Ino. the unique blamic nature of the university. It is, he believes, going to be the Hag-ship of the wurld of modern Alusbin Dr Naseeff, n geologist who did

his postgraduate work at Leeds lintwestry, sinus on the different facing the senter infinitistrators on the rampus: "We are planning, running and building a university at the cases done" he says the same time", he says.

In was the university's duty to well before the year an 2000 Mecca will have become an automount university; so, probably, will the Medina offshinnt. The leddah compus will have a grown into a University City containing over 40,000 people. A student ununneal for getting around the compus will have grown into a University City containing over 40,000 people. A student ununneal for getting around the compus will

a University City containing over 40,000 people. A student monoral for getting around the campus will be smang its futuristic amenities.

In the sharter term, rapid oxpansion of the site is laid down in the country's Second Devalopment Plen,



Sheikh Ahmad Salah Junga founder of the universit

have, no fair as possible, the approinted to the top possion depa

"keep an eye" on breig and or from countries with a me the Islamic emphasis of the learn is maintained.

This is particularly important the university is preparing byte in absorbing the traditions in learning based on Kara principles in favour of a celsystems and much once reliance

is an anchor.

According to Young, the NL

According to Young, the NL passed through a succession of stages or postures, withough each oreisped the other. In the beginning there was moral commitment, individual concern and personal witness—a manifested in the peace and civil rights movements. The second phase, roughly from 1963 to 1967, was charocterized by participatory democracy, projects and essentially communal octivity. The bird phose was that of the sattwar campaign, marked

In another five years it is hope that the majority of the academy will be Samilis, but his recognic Shelkh Junijount's preorengation with quality is shared by the university rector, Itr Duar Zubeit, and by the vice-rectur. Dr. Abdudlab and Dr. Nascoff composition and Dr. Nascoff composition of the control of the co plete Sandi-ization even in # Much discussing is the place

mmong the university's vibras planners about whether was should eventually all be given in Arabir. Many people doubt no sibility of this, especially hard fields as medicine. They point a to the fact that much echica work in the ministries in Right is carried out in English.

the the other hand it is any to reach everything in Arabic ) philosophically, the unbilical led between the Arch longuage of Islam ore cophosized: it is con-tended that a revival of Musi-culture and learning through the a contradiction in terms:

ing satiwar campaign, marked by mase confrontations with authority, fierce and-Americanism, and the revival of Marxist concepts. The final stage was intensely noten: black power, urban guerilla warfare, bombings, arson. In Yong's view, the authentic NL identity and outlook had crystalized by 1966 but failed to survive the audel watershed of 1968, which precipitated a degeneration into survive and dictatorial tendencies fallaned by the resurgence of introduction in short, the Old Left, weight a deceptively youthful task, blighted the brief furt beoutle syperiones of the children of late. But, as Dr Noseoff says: "We s ploneers, und in some the Young's determination to blante the "Old Left" for every outbreak it violence and authoritarianism is a blidefeatingly Manicheau or tribal earcise for a historian. A giance at the history of the Narodnik movestiin nineteen checutury Russia bloates a broadly parallel pattern the peaceful, persuasive inpulses the Go-to-the-People militums:

Mai moo drowned in bitterness the speeced by the bomb-endhe dinavallye. Time, not more; to me enemy, And perhaps, too, at lack the courage of our confe

Paul Moorman

# 

# Innocence as a revolutionary weapon



The "children of light" of Woodstock, 1970. Was "flowerpower" the outhentic core of the New Left?

THE TIMES HIGHER EDUCATION SUPPLEMENT 21.10.77

The "children of light" of Woodstock, 1970. Was "flowerpower" the authentic core of the New Lest?

It is "children of light" of Woodstock, 1970. Was "flowerpower" the authentic core of the New Lest?

It is make the property of the propert

Even so, the NL refuses to en-capsulote itself. Indeed sintost all its seers and prophets were ex-propriated from cultures already formed: Marcuse, Camus, Sarire, Walter Banjamin, Artsud, C. Wright

The NL, after all, did call into question assumptions scarcely ever challenged by the Old Left, whether eoclal democratic or Marxist: that age and experience justify authority a that to be old

tha revolutionary neo-Marxism of national phenomenon, yet Young's Sertro and the Individualistic humanism of Camus. Camus le Young's mentor; Sertre's celabrations of Castroite camaraderie and bloodletting, like Fanon's eulogy of Therd World present violence, are

regarded by Ynung as seductive poisons which contributed to the violent romanticism and the bern cults that deforated the NL after 1968. The strategies foronted by Young are those which stop shurt of violence: demos, featernization with troops and pulice, strikes and go-slows, unn-conperation and tax refusal, war resistance and desertion, occupations and boycours, even subourge. In other words, limiting

optimism, tenderness, awareness of the opposition's homanity, the grent libertarian ethic.

I find myself almost completely persuaded by Yong, He is right, wise. All those on the Left—tho vast majority—who are obsessed by tribal victories, by muscle and short-term officacy, all those who deride the libertarions and pacifists as impractical yogis, are merely unimals galloping round and round Orwell's form, believing themselves to be trovelling in a straight line. (OK, Man, so Hocle Some pours all this shit, this mopolin, on your head, he decimates your family with fragmentorion hombs, so whom are you going to do, just sit there and pray like a Buddhist, or maybe set yoorself on fire in protest?! It's a problem, certainly; the problem, Young's devostatingly accurate account of what happened to the Left during the later years of the Victuam war (the crude Ho-worship the whitewash of National Liberation Front, excess violence, the nolva romanticization of NFL superdisciplins), reminds us that the vision of liberation entertained by the tribal, eye-for-an-eye Left lepathetically short-sighted, bilakered. As Giap advanced, deallowing artillery and tauks in conventional formations, razing villages under eystematic bombardment, liberating e race of corpses, a Vietnamese peacant might well have asked: What does Picasso's Guernica really mean?

Finally, this is an important book

d diced scenario.

Nigel Young dramotizes the history of the NL as a contest batween violence and non-violence, between the revolutionary neo-Marxism of Sectro and the individualistic humanism of Communication of the proportions.

Nor can the author's decicion to ignore the European New Left—the events of May 1968 in Paris ere summarized in three pages—be justified. The NL was an international phenomenon, yet Volumes humanism of Communication of the proportions.

# Differences in perceptions

orden is one of those countries along which glib generalizations are thereafty made, and it is useful it a comparison between Sweden and Britain, brings out the more which in the course and all ambiguous differences the two countries—even if a substitute in the sweden with which the substitute of the labor does not always do as a parison as he might.

It comparative attitude survey its two countries, covering question of the percaption of inequality of percaption of inequality of percaption of inequality, economic

by hackground material on the facts about lucquality and other structure of their sociaty, than do Sweden. This is a rather familiar and sweden. This is a rather familiar ond nerrow focus for a sociological study, but comparative material of this kind is rare and Scase's book is swedene for that reason alone, in addition to its other merits.

The most salient points to emerge from the study are the followings the two countries are supprelengly similar in their patterns of inequality, and while far from optimistic about their lown chances of edvance, they see their society as more open, especially to those able to secure education. (The British, in contrast, regarded suck, wealth and their social mobility within them, though the Swedes habour movement because the main sources of advancements.)

There were also considerable differences in workers perception of the role of the labour, move and the Social Democratic the sating differences in the role of the labour, move and the social Democratic the sating differences in the swedes their lives of improvements workers hardly in acknowledged their existence. In a second the social suck, we also considerable differences in workers perception of the social Democratic the

conditions and power supplemented by hackground naterial on the facts about lucquality and other structure of their sociaty, than do send the structure of their sociaty the sociaty is mount in sectors in select size of the structure of their sociaty the structure of their sociaty than do send the structure of their sociaty the sociaty as mount underestal on the structure of their sociaty the sociaty as mount underestal the sheer longest to structure of their sheer longest to the same underestal of the sheer longest l the sheer longevity of Social by bureaucracy, with a large degree of the sheer longevity of Social Democratic government in Sweden, but he doss draw ettention to other major factors; the fact that party and union rhetoric in Sweden is much more geared to themes of class and inaquality and, closely related to this, the much more interested in this way the difference of says, it is doubtful whether one can really speak of a British labour movement.

In his discussion of differences between the British movements of the workers' goals. In this work Scass between the two countries labour movements of the more dishered to but never really tries to resolve the significance of the much higher of action and outcomes rather than in additudes—remain to be explored, spands out as decentralized, relevances of the workers' goals. In this work Scass pays, attention to some of the workers' goals. In this work Scass has drawn attention to some of the sociol political structure—but many others, in the domain of patterns of action and outcomes rather than in additudes—remain to be explored, spands out as decentralized, rele-

**C** 1 R

# A very personal literary history

History of Scotlish Literature by Maurice Lindsay Robert Huic, £8.95 ISBN 0 7091 56421

The writing of literary history la difficult and demonding. Not only that; it is open to ottock es a dubious furm of intellectual endeovour. Literary histories have been information about works they have never read to that they can refer to them in examinations and so give the impression that they have read theor. And then you can argue about what literory history is. Is it a seriee of descriptive or critical essays on works ond writers arranged chronologically? Is it a form of cultural history, endeavouring to rolote writers and their work to the developing cultural pattern. information about works they have

How does he see his task? Like most critics and historians in these islands, Scattish and English olike, ho is not especially strong of questions of methodology. The purpose of his hook, he tells us in his preface, is "to present to the general reader o full account of Scattish literature". He qualifies this by saying that Goelic literature does not come within his compass. "A full account." But what is not count of literature? Should it include biographies of the writers, should it ottempt to raise questions.

How does he see his task? Like ing inclusions and omissions. Though we are tall that the six teenth-century pact. Alexander Montgomeries, Earls of Eglinton, no mention at all is mude of what I think is his finest poem, or in my even one of the must remarkable Scots poems of its time, "The chapter on the elghteenth solventhin with a discussion of the mast remarkable. The chapter on the elghteenth is and a literary historian must be silowed his own. But it would seem for to soy that there is too much should it ottempt to raise questions

arranged chronologically? Is It a form form of cultural bistory, endeavour ing to relate writers and their work to the developing cultural pattern of a people? Should its basic principle of ordering be in tarms of literary forms and kinds, or of general social and cultural forces, or of the biogrophics of authors, or a combination of all these?

There is no simple answer to these questions. But specking as one who has himself tried to write literary history, I mast say that I think literary history is both defensible and dealrable and though every literary history works in o centext that will bely the render to see both the relationship of these works to inteller caltural and social background and their relationship with each other. Its function is no set a critical account of the revisition and their relationship with each other. Its function is no set a critical account of the relationship with each other. Its function is no set a critical account of the revisition and their relationship with each other. Its function is no set a critical account of the revisition and their relationship with each other. Its function is no set a critical account of the revisition and their relationship with each other. Its function is no set a critical account of the revisition and their relationship with each other relationship with each other. Its function is no set a critical account of the revisition and their relationship with each other relationship with each other. Its function is no set a critical account of the revisition and their relationship with each other rel

This own critical views are on the whole somewhat conventional. He obtacks Augustan pagetic diction as "stilted" and resulting from an "absence of confidence in the spoken language of the day", which is surely to ignore some very important reexaminations of the notine of Augustan pagetic diction from James Sutherland to Donald Davio. And he makes same surpris-

and a literary litsorian must be sllowed his own. Har it would seem fuir to soy that there is too much hiographical detail, especially about minor figuros, and the apaça it occapies would have been better spen on further critical discussion of the works. Surely a writer's biogrophy is only significant to a literary historian if it illuminates samething obout the position, status, fate or social and cultural significance of the writer at a given time, or if the choracter and quality of an author's work are illuminated by a anthor's work are illuminated by a consideration of the details of his life.

they provide welcome refreshment.

Surprisingly, Lindsay is better on the medical makers and aspects of poetry and music in the sixteenth century, where he clearly knows the modern researchers and brings their modern researchers and brings their combisions impumponsly to the combined and many the first poetry and many the first

Encyclopedia.

The chapter on the eighteenth of the mivels of Smoden and Heary Mackenzie. But before he inkes up their work Lindsay has thought it in accessing to give the reader a moted history of the mivel, from the first Sponish plenresque mivel the first Sponish plenresque mivel the first Sponish plenresque mivel through Nosho, Bunyon, Dofoo, Richardson and Ffehiling, all in less than two pages. There is really in justification wintever for this list of inevitably over-simplified generalizations about earlier fiction in Englond. It helps nobody to in Englond. It helps nobody to middle term between the first sponish plenresque mivel the visions—and constructions, in Englond. It helps nobody to middle term between the first sympses of the proper than two pages of the cult of sentimentalism. Sentimenrolism in Scottlsh charocter and literoture loss a foscinoting and complex history and this might have been an opportunity for o major probing of its romifications, but such probing seems outside the limits Lindsay set himself.

The personal tone re-emerges in the rearment of nineteenth and there is little and the first sponish plenresque mivel in different between the first sponish remains the first sponish them, and it seems by the significant that the backnown manuscript poems—sign them the book suffers too froiting the serious spons the first sponish them, and it seems by the significant that the backnown manuscript poems—sign them are different between the first sponish them, and it seems by the factual narradia sits to the visions—and construction to the factual obotes. Competently manufactuated obove and gives

The personal tone re-emerges in

The personal tone re-emerges in the recatment of nineteenth; and twentiell-century literature. Here it is often the unexpected judgments, aupported by quotation, that impress most. Mr Limisay makes a persuasive case for the anyels of Mrs Oliphant, which he discusses at length. Desling with the twentieth on his own grannd and his tane is one of relaxed confidence, olanist one of relaxed confidence, olanist chatty indeed. He neatly solves the problems of dealing with himself, as one of the Schrish meets to be discussed in the chapter in the schrist Renaissance, by quoting a review of his work written by his fellow-poet and critic Alexander Scott. The lonak is, incidentally fellow-poet and critic. Alexander Scott. The look is, incidentally, dedicated to Alexander Scott, who in his two gets sympathetic transment in the Scuttish Remaissince chapter.

modern researchers and brings their conclusions imponing to the reader, then on some aspects of the eighteenth century, which he knows as well and on which he has written attention the cork of many influences with the eighteenth century portion of the open first head, and his case and the open first head, and his case and the conflictness betray him into some odd errors.

Allow Pamears was been in 1 and the first things the hind, is in antipolary the outher of Visions and the control of the cork of many inclusive them the surface with the surfa logy of extracts from works known and unknown. There we some espe-cially interesting quotations from sixteenth-century prose. The conclusion, suprisingly, is that the bank is as much a contribution to know-ledga os to understanding.

David Dalches

# **Episodic**

William Blake : A New Kindely hy Michael Dovis Elek, £6.75 ISBN 0 236 40054 1

Michnel Davis's William Blete New Kind of Man is described indicated obove and gives by up serious chance of gently sense of Blake's person, middle term between the for

cee of Blake's Inspiration at all known; but there is like so luter on for recopitalising this so (they remain relevant), and the rative has an episodic, not a contain the effect.

The Chemistry of Alercury edited by C. A. McAuliffe Macmillan, £25,00

tritions foundation, but it is one converted a response to the most giving of many incunsistencies between his life and his work. As far it we know, the outhor of Visions it the Isinghters of Albion, a most incuniful and outspaken hyma is free lare, was happily and fait fully married.

fully married.

There is real evidence, howers, of another kind of relationship be tween life and works: tha Vision show the infer and works: the Vision show the infer of slavery likely felt vicarlously when the illustrated Stedman's Norrative of a Five Year. Expedition against the Revolts Nagraes of Surinam. Similarly, Bluke's condemnation of the Mirriage hearse "may have its launed diato source in social observation rather than in the facts of his own.

# Map analysis

ISBN 0 395 18699 4

Geography students require an introduction to quantitative methods for two reasons: to allow them to lor two reasons: to allow them to lor two reasons: to allow them to gray and evaluate the procedures adopted in the research literature which they must read; and to form the basis for their own cesearch efforts. Ideally, this intruduction should be based on a sequence of courses for all upper-school and undergraduate students using sumdard mathematics and statistics texts; members of individual disciplines—could dien provide their own examples and discuss particular problems associated with their subject-matter.

Lacking such a numerate utopia. tacking such a separate disci-plues have taken to providing their own texts which both provide mathematical and statistical foundations and oudine the uses of relevant procedures. This is what Taylor has done. He comphasizes that his is a geography text: to all intents and purposes it is a human geography text. Most of the emphasis is on geographical appli-cations, nichough the familiar examples of coin-tossing, balls in uras, and invelligence testing are all there. Within the constraints of his

150,000 word equivalents tthere are many excellent diagroms) Taylor presents a fairly narrow focus an map analysis. There are three introductory chapters an unalls, measurement and probability ful-

Gaantilative Methods in Geography:
An introduction to Spotial Analysis
by Peter J. Taylor
applied spatial analysis, mainly
concerned with aspects of flow

Most of the presentation is excep-lem and some parts, such as that on enustrained gravity models, are models of clarity. The style is pleasant and easily followed and pleasant and easily fullowed and little is assumed mathematically, although some formulae are intro-duced in a rather cavalier fashion; broch more is assumed in terms of geographical terminology. There are few major errors of substance, the most elacting being that added the most glaring being that which confuses estimation with prediction from regression analysis. The early chapters are the hest, although it was on old decision to treat descriptive statistics before measurement. That on factorial ecology is least convincing; certain cancepts are not fully explained such as the resultant, orthogonality of initial solutions, and communication. solutions, and communatity; factor scores get but a fleeting mention; and the analysis of variance is intro-daced as a side issue rather than as a fundamental technique with particular relevance in experimental

design.

As a potential text, Quantitative Methods in Geography provides a generally lucid but somewhat electic cuverage. Written for the American market, its hurdback price in Hinain is high, and teachers will need to evaluate it as a busis for a whole introductory course. Those polo find that its contents fit their requirements should find that their students benefit considerably.

Mercurial facts and folklow

# コロコスク Taking measurements

Methnen, 19.50 and 15.95 ISHN 0 4t6 6537H 7 aml 65380 4

what most geographics will expect from the simple title Maps and Storistics. This book represents a distinctive and original presentation of basic interential statistics for a geographical unificace. The approach is very formal as the argument is broken down into market articles concerning definitions, prupositions, hypotheses and lesing Hence we are presented with mg rience we are presented with a very rigorous and logical introduction to statistics. Nevertheless, this hook is about statistics and amps. The presentation is totally thought out in terms of maps and this perhaps constitutes Lewis's most original contribution.

in section two along with regression lines as methods of analysing point symbols while rans tests, correlation R. J. Johnston coefficients and goodness of fit tests are presented as methods of analysing line symbols.

h is difficult to present Lewis's ration de for this organization in just a few words except to note that the arrangement is logical and consistem within the definitions and concentral notions underlying the book. Lewis deliberately challenges accepted practices in quantitative geography and this is the reason why many geographers will feel in-fantiline with this book. Two good examples are the author's avoidance of the use of the terms ratio and interval in the treatment of measurement scales and his dismisand of over and volume as bases for distingoishing map types.

This is certainly o technically sound and thought-privoking book. Assessment is difficult, however. According to the dust jacket tho hook is "a deliberately elementary impoductory text". Notwithstanding the alexanders of the designations. the elementary nature of the statis-tics, the excessively formal approach will make it difficult reading for most original contribution.

The book consists of three sections. The first introduces maps as scaling device for measuring location and links this to hasic ideas are then applied in the two other sections, the second dealing with paint symbol maps and the third line symbol maps and the third line symbol maps. These final two sections consist basically of a listing null illustration of a wide range of statistical tests. The way in which these are linked to maps is unconventional and sometimes a little obscure. Hence we find continued the first paragraph sets the tone with funct definitions starting with "nuns" and leading with "nuns" and leading with "nuns" and leading with after land each section concludes with large numbers of simple exercises which should enable the interested student to keep up with the argument. This is really a question of how one likes ideas presented. The formal approach has both advantages out disadvantages. On halance this hook hamesses the sulauce this hook harnesses the advantages of the more formal approach to provide a volumble new contribution to the quantitative geography literature

Peter J. Tgylor

# Place space

Location in Space: a Theoretical Approach to Economic Geography. by Peter E. Lluyd and Peter Dickeu Harper & Row, E8.95 and E5.95 ISBN 06 31 8058 8 and 8059 6

for the breation and spatial arrange ment of economic activities is one of the most intractable of tosks. It seems at times to require either geographical-communic admissione or a simply economic-considering cal faith, but it can be developed by close attention in detail within each of the variables involved and in their spainl interactions. Piter Lloyd and Peter Ocken adopted the third of these courses in their first edition nod have extended and enforced in their second.

Much of the book has been thoroughly revised and rewritten to incorporate near ideas, to eliminate

thoroughly revised and rewritten to incorporate new ideas, to eliminate the terseness of the first edition and to be as explicit as possible. An emirely new chapter examines the locational behaviour of those firms, typically the multi-nationals, that function in a number of location. thems, typicing the multi-nationals, that function in a number of locations. The chapters on economic bealth and policies for regional development laye been dropped. The sequence of topics covered is systems in economic geography.

organization of economic activities; spatial order of towns and agriculture; spatial variations in the availnbility and quality of cesources os
they affect manofacturing Industry
and agriculture; trousport and economic location; production costs
including those of labour and
capital and the effect of technical
knowledge; spatial variations in
demand, economics of scale and
agglomeration; locarlon decisiononaking and the behaviour of entreprenears in conditions of uncer-

coordination chemistry of mercury ioctumily just solid compounds) and A. J. Bhandworth ur the organic chemistry of mercury. These indigens are the best of the River Lakes of Canada and the interest Lakes of Canada and the recording the part of the control of th

chapter has a number of exercises for the student.

The book should be readily understandable to the firat-year university student, although it goes jate much amounts of attention paid to time and the economic-historical factor, to the relationship between geography and increased in the cole of political ideology, whether personal, lockly national or supra-antional, in economic-geography be familiar with this book makes a huge contribution, to theory in economic geography and increased in the cole of political ideology, whether personal, lockly national or supra-antional, in economic-geography be familiar with this book makes a huge contribution, to theory in economic geography and is a substantial improvement deem upon its very very little is changed, and most pages read oxactly dia same as previous editions. In face, to the indicate without it and our understanding of economic geography and the signature are the comparatively small amounts of attention paid to time amounts of attention paid to time amounts of attention paid to the cole of political ideology, whether personal, lockly national or supra-antional, in economic-geography and the expense are the comparatively small amounts of attention paid to the cole of political ideology, whether personal, lockly national or supra-antional, in economic-geography and the expense are the comparatively small amounts of attention paid to the expense are the comparatively small amounts of attention paid to the expense are the comparatively small amounts of attention paid to the expense are the comparatively small amounts of attention paid to the expense are the comparatively amounts of attention paid to the expense are the comparatively amounts of attention paid to the expense are the comparatively amounts of attention paid to the expense are the comparatively amounts of attention paid to the expense are the cole of political ideology, whether personal, lockly in the

# When chemists come to write books, as opposed to cullecting locus! dots in research or review papers, they meet the problem of sostabiling interest throughout long passages of connected and just cullected, material. If anyhooly is to be interested in, for example, a book on the chemistry of mercury he has to be made to read on. Fro possible way of nehicing this base occured to the editor of this book. The first is to include a chapter

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The first is to include a character of necury through the ages, the believe approach (by W. V. Farrar and A.R. Williams), and the second is to have a short account of the beckenistry of mercury, the swinonmental approach (by F. II. Falchik, L. J. Goldwater and B. L. Villee). Curiously these two chied lasty mursels, still very factorial approach in the book or even put side by side sock or even put side by side socky: courses of factuol material was agery specialist matoca—W.

along and C. A. McAuliffe on the tribution on the earth, natural and

ment, an solld cumpounds, on aqueous solution chemistry and on organic chemistry. In each chapter fulklore and biological effects on the environment could have been

placed together and interest tained by anecdotal reference. For example, the chapter on ele-

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dimensional study to be reduced to the problems for three-dimensional investigations of special problems manifolds and reduces some questions of two-dimensional manifolds. On related menters, both solved and Reference is next made to C. D. unsolved, such as the ability to

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Chemistry is in rianger af hecoming hings bore—tought like the marked in the first chapter. The book then gnes on to it in the first chapter in the book then gnes on to it in the first chapter in a logical and consistent way. There are chapter on navigation, binary stere, and eclipses and the chapter on planetary positions looks at the first condition of Quickailver? Had but MacAuliffa and his collaborators reod Pliny's account of refining gold using mercory (p5) then never agoin would they treot this "mallghant silver perspiration" in such a matter of fact manner.

The book should be readily understandable to the first coverage university are student, although it goes jate much amount of fact manner.

C.

R

# 30013

Seeking after truth

ledge: A Sociological Perspective by Derek L. Philips Macmillan, £10.00 ISUN 0 333 21314 9

Under the impact of Witigenstein in philosophy, Toulmin, Kohu, and others in the history of science, and Karl Mannhelm in sociology, it is becoming opporent that practi-tioners of the different disciplines not only have something to learn from each other, but also that sometimos they are octually onguged in the very same inquiry.

A centrel concern la whethor, and in what seuse, we may think of science na giving gists are right to see claims to knowledge. In there something called "the truth" which may be reached by practising the so-called scientifle method? Or is the relationship between theory and practice, presumption and belief, ao iuevitably and intimately entangled relative certainties, upon which we as to make it pointless in talk of may build. objective knowledge and discovery?

there is no ultimate criterian of mechanics. There then follows a position the departure is signified. period of lurmoll which generates There sto, however, some vast and new conceptual categories through crucial issues which are not ade-

The Pity Of It All: Polarization of Racial and Ethnic Raintions

Leo Kuper, an Emeritus Professor of Sociology in the University of California, Los Angeles, ia a South African exile who has been examining the relations between race, class and revolutionary change in other parts of Africa. Implicit in his work is the search for a strategy that could deflect his former country from a course that seems to lead to a bloodbath.

by Leo Kuper

Duckworth, £12.50

ISBN 0 7156 11143

Wittgenslein and Scientific Knowledge: A Sociological Perspective
by Derek L. Philips

which the phesical world is riewed.
Between these two paradigms there
is in a sense outling in chaose, and
by Derek L. Philips

which the phesical world is riewed.
Guardly faced, although they are
by Pierce Roardleu

translated by Richard Nice
the sociologist of helief systems.

Cambridge University Press, 19.1 also excludes other possible occounts and explanations.

Professor Philips's object is in In the past 20 years or so three examine the Kuhnisus perspective apparently disparate areas of intel- on the history of science with the lectual inquiry have been drifting aid of the philosophy of the later towards each other and are now Wingenstein. He is particularly beglaning to rub together in ways concerned with the issue of the which may well be of considerable relativism of knowledge claims, and consequence. Those areas are phile- also, so he anys, with the prablem coply, history of science, oad socio- of the foundations of unchority in logy of knowledge, and their com- Western science. Aldraugh this mon concern is with the noture of later problem does receive sume sttentign, this book is in no sense a sociological investigation of it. Rather, Philips sees Wingenstein as offering some substantial conceptual insights to uid the sociologist of knowledge, and a very high proportion of the book is devoted to an occount of Wittgenstein's life and philosophy.

Briefly the lesson which Wittgengteln has to teach is that while Kuhn and others are right to emphasize the relativista of claims to knowledge (and therefore socioloknowledge as to o large extent culturally determined, we are not thereby forced into a total relativist position, because within out own languege-game there must in fact certainties, albeir culturally

There is much in this book to Under the impact of Kulia, it is commend. It highlights on importnow quite common for social his- and Issue in well-expressed and fortuns of acience to argue that Jargon-free language, and pravides a valuable text for discussions of truth and rationality in science. At the surinbugy of science. The one time, say in later medieval account of Wittgenstein's phila-Europe, there was one paradigm of sophy although dargely ocknow-stunded unswering them. One sleft rational explanation of the natural ledged to be derivative, is clear and world in which there was no cou- accurate, and where the account ceptual place for, say, Newtonian moves beyond Wittgenstein's niva

Away from the bloodbath

steln's philosophy that one count understand the language unless one plays the game.

A further problem: if there is no this not because we cannot even specify what it is we require? Is the relativist merely deaying some-thing which he cannot even specify? Do we anyway need or ever use, in thu sense, an ultimate

The author is aware of these diffiwith the strong impression that there is much for the philosopher to accomplish before the darker problems of the sociology of science will be illuminated.

G. A. J. Rogers

# **Bold eclecticism**

d. quarely faced, although they are a mining the most difficult problems for the philosopher of science and the sociologist of being systems.

One such may be expressed like this: is there a hard core of facts and categories which no conceptual schemes are possibility of descriptive memphysics? If all content are the possibility of descriptive memphysics? If all content are the possibility of descriptive memphysics? If all content are the possibilities in their endly cannot be a rathonal choice between them. But are they all so equal ? Traditionally, philosophers have often probe to ose assessed as unitted with relativism then colling survives, and that is indeed the sociologist, from his Olympian heights, indeed that off colling to the sociologist, from his Olympian heights, indeed that off colling to the sociologist, from his Olympian heights, indeed that off colling to the sociologist, from his Olympian heights, indeed enbedded within ot theory of science, and for which is the every to make contact with the world within to theory of science, and for the sociologists.

Onde such a such may be a present of the sociologist of the sociologist is programmed. There are muny passages and the procession are continued to the procession are content of the sociologist, from his Olympian heights, indeed that off colling to the procession are content of the sociologist of the sociologist is procession and the sociologist

Condemned always to be the observer, oever the participant, he must also risk not even knowing what the game is anyway, for there is a clear implication of Wittgenit in smaller case, works because it is intelligently and my mecha-

aically done.
Brandlen's dieory of practice is bull up bath in opposition to pheno-menological-ethnomethodological su-ciplugies and anthropologics and, pasitively, through an extensive disdoxa and symbolic capital. I shall cancentrate here no the latter, as his callelisms of subjectivist theories, while devastating, do not add unch in the sites of previous devasta-

in the sites of previous devastations.

Both habities and draw ato complex enucepia which themselves
imply complex theoretical constructions. At the risk of snunding simplistic and making Banadian sound
banal, habities Banadian variously
refers to us the "durably installed
generalive principle of regulated
improvivations" [p781; "the penduct
of the work of inculcation and appropriation necessary in order for
those products of enflective history
... (language, common, ote) to
succeed in regulating themselves "

they are salient.

The male-female couple, as which is built up layer upon lag throughout the book, illuminate nature of property relation is Kallylin and the ablguly of fora aperating to maintale the soid order. But these themes, cental a the hould linth as ethnography at as flourdiet chases after an interes-ing idea, or a fascineing saring or a nunginal critical eregals. For some this will be the ment of a buok that is an bold as to the materialism and the conditions of printing that it is an action, for majorial life so serious, for the conditions of majorial life so serious, for the conditions of majorial life so serious, for the conditions of the co

others, and I om one distributed in it is difficult to know that that it is difficult to know hith any of practice leads. It calls highly recommended as a cooler, and after heauthfully writes fits of philosophical literature, but at social scientific product—addithink that this is the color against which Bourdley would vis himself to be judged—its sauce and colored deathful.

Leslie Sklah

# vinlence of liberation. For some guerillas viole :e is ellegedly liberating, pur jing, and therepeatie. Presis mr Machel of Mnzambique assorted that in the hands of the onemy an automatic rifle was an instrument of repression, but in the hands of feeling an iostrument of liberation, "It is the same gun, but its content has changed because flose who use it have different alms, different interests." In such ways bolk sides justify thomselves. Socratic teacher

siou, but in the haods of Ftelimo an instrument of liberation. "It is the same gun, but its content has changed beceuse those who use it have different aims, different interests." In such ways bolk sides justify thomselves.

To soch rhetoric Kuper opposes case histories of Algeria, Znnzibar, Rwanda, and Burundi, in each of which there were armed struggles which took the form of racial massacres. They are horrible waraings.

The path to independence in Algeria was signposted by a scries of massacres leuding to the casual slaughter on the streets and the bondongs by the French Organizo.

In the depressing canchusion is that the conditions for intergroup harmony oxisted in all fout countries to a greater extent than they do in South Africa. In Burundi there were initially many bonds linking members of the two ethnic groups. In the lirst phaao of violence litutu were slain because they refused to join in ottacks on Tutsl. Nor were members of the two groups always easily identified. The trust murder squads were helped by lists of Hutu atudents drawn up their Tutsl murder squads were helped by lists of Hutu atudents drawn up their Tutsl teachers and lellows that the conditions for intergroup harmony oxisted in all fout countries to a greater extent than they do in South Africa. In Burundi there were initially many bonds linking members of the two ethnic groups. In the lirst phaao of violence litutu were slain because they are interior to include general as one of the seminal thinking members of the two groups always easily identified. The trust murder squads were helped by lists of Hutu atudents drawn up their Tutsl teachers and lellow stilled by J. L. Mehtu Routledge & Kegnn Poul, £5.75

IsBN 0 7100 8638 5

Martin Heidegger (1889-1976) min tries to a greater extent than they do in the lirst phaao of violence litutu were slain because they are formed as one of the seminal trust cannot they were first phaao of violence litutu were slain because they are for the two groups are formed as one of the seminal trust cannot

his throught, and have Biemel brief Mactin Heidegger: An Illustvated out Heidegger's unique quality 85 2
Study

Bernel telk as that there is entro-fold leitmutly in Holdegger's thinking: the question of Being and the inquiry after truth Heidegger's necessary of "being-in-the-world" is necessary from the being-in-the-world is necessary from the Ing the relations between rees, class and recriptionary change in other work is the same for a strength of the same for a streng

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## DIRECTOR OF THE SCHOOL OF EDUCATION

Applications are invited for the poet of Director of the Sehool of Education and Professor in the Eaculty of Education from October 1, 1978.

The Director will be taking up his/hers epoblished at the very time of the amelgaination of Saint Luke's College with the University School of Education (that formal date for which is elso October 1, 1978) and he will be expected to provide continuing laudership both in the shaping of general policy and the development of research programmes for the new and enterged School.

Further particulars should be obtained from the Assignio Town. Private. Bag. AA. Registrar. & Secretary, University of Exeter Northgote Town. Private. Bag. AA. Capa Houso, Quasin's Orige, Exeter EXA 4QJ. Closing delay for redetal of applications (12 copies, everses, eshillates to Registrary to the fact the redetal of applications (12 copies, everses, eshillates to Registrary to the fact that 15th one page), November 15, 1977.

#### UNIVERSITY OF CAPE TOW

## Lecturer in **Business Science**

Applications are invited for the riost of fecturer in Busi-ness folloy and/or Organisa don Theory in the Depart ment of Business Science.

Applicants should have good academic qualifications in Economics, Business Admioistration, laduatrial Sociology or in related tields, as well as relevant experience in business, teaching and research. Candidates should indicate any ability to participate in one or more, of the other courses of reaching in the Department, such as more of Business, Marietting, Personnel Management, and Braines, Marietting, Personnel Research.

Appointment will be made, in accomionce with qualifica-tions oud experience, on the scale R6,300 x 350—R9,180, plus an odditional panalon-ahla allowanca of 10 per cent or basic salary.

Applicants should submit a full curriculum vitacy stat-ing age, present salary, rele-your business or teaching ex-

### UNIVERSITY OF THE SOUTH PACIFIC

Applications signification and the post of LECTURER IN BIOLOGY (Post 77/92). Functions of the appointes with include teaching courses to liral, second and linal year degree oludents in the liefs of Popalicitics and Evolution. Profession of Popalicitics and Evolution. Profession will be gives to applicate with a botanical beokground, able in mount short course, in the lipid of plant systemation or lexonomy OR with astiticity course. In the lipid of plant systemation or lexonomy OR with astiticity course. In the bublect, Experience in troutcal Flora will be an adventage but not a pra-regulate. Salery in scoordands with qualifications and experience on the Lociaror scale, F36.945 to F39.827 (1) sterling equals F81.80]. The British Government may supplement calary by 21,586 to C2,002 p.a. laterling) for merried eppointon of ing) for merried expolition of L546 to E.1,080 intelling) for olegte oppoints tempolitimally free of all tex ond reviewed entitlety and provide oblidition's education allowances and holiday viate peasages. It additions the University provides the per cent gratitity, superammanish of the per cent gratitity, superammanish of the per cent gratitity, superammanish allowance, party is missing accommodation at a maximum rantal at present of 15 per cent allowance, party is missing accommodation at a maximum rantal at present of 15 per cent allowance, party is missing at per cent at the south Peolitic, PO Box 1150, Swa, Fill, Appligants per cent in UK should also sand one copy to inter-University Cosnon, 90/91.

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#### BELFAST THE QUEEII'S UNIVERSITY

Applications are invited for the following loctmeehips, evolution from let January, 1978, or each other dates as may be erranged: LECTURESHIP IN ECONOMICS Applicants must have qualifica-bone and research interests in Economic Theory or Applied Eco-nomico. An interest in Ocyclop-ment Economics or International Economics would be an odyest-ags, but is not a requirement.

LECTURESHIP IN SPANISH AND PORTUGUESE goed henours degree enish with Pertuguese sential. Tosching enporton search and publications

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Initiat placing, which will depend on age, experience end qualition-tions, will be made at one of the first three points on the scale (under roview) for fecturers: 23.933. C3,647, 23,761 rising to £8,955 with confituelary ponsion right under the FSSU/USS. The appointment will be subject to a specied of probation of up to three years in durollon. Assistance with removal expenses is evaluable.

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Further particulars are evallable ham the Personnot Officer. The Queen's University of Bellest, Geffest 617 1NN, Northern Ireland. Closing dais: 18th November, 1977. [Please quois Rel. 27/TH.]

University of Melbourne REGISTRAR

ne University invites application of the position of Registrat which the position of Registration denugafor the position of Registrat which will become vacant on January 1, 1878, on the relitement of Mr. A. T. J. 681, O. 9.E. Teniura end selary are as for a Professor (salery el present \$A30,786 p.s.). Applications from persons (sith extensive experience in any lioid of administration will be well-tened, but ouccessful experience in second edministration will be en advantage. University or equivalent electrons ere esseullet. Further information, lockulary deor equivalent aducation of qualifications ero essential, caliform ero essential, further information, including delaifs of application procedurs, superantuarion, travel and remays! a posses, housing assistance and conditions of appulations, is available from the Council Executive Officer. Att critical expositions (marked "Confidential") should be educated to the Council Executive Officer. The University of Metaburna, Parkvilla, Victoria 3052, Australia, Futher islamation elso available from the Sectolery Constol, Association of Commonwealth University of Metaburna, Parkvilla, Victoria 3052, Australia, Futher islamation elso available from the Sectolery Constol, Association of Commonwealth Universities IApple.1, 36 Gerdon Squere, London WG14 OPF, Applications close on Oscamber 16, 1977.



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Applications are invited from productes for the post of LEC-TURER III FINANCIAL MAN-AGEMENT, in the University's Studies. Candidates should have a specialized interest in busioess finance.

Salary within the scale 13,333-26,655. Postcard requests for application forms and forther details to Paul Julinson, Establishment Officer, ref. 77/3.1MS. Informat telephone inquiries only be made to Professor John Sizer (0509 63171, ext. 325).

Loughborough Leicestershire

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(stary £6,432-£7,134 (bar) -- £8,070) (salery date for applications : 30th November 77. Department of Mothemotics, Signature

Lecturer-Senior Lecturer in Data Processing |Hary 13,744 (bar1-16,909)

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To teach Data Processing and Systems Analysis on II.N.C. and II.N.D. Computer Studies courses, the Data Processing and II.N.D. Computer Studies course and to be involved deneral of the Modular Degree course and to be involved in the range of basic computer studies reaching. Applicants must be grabutes, having studied computing formally to some extent and have relevant Industrial experience. Tooling date for applications: 28th lictuher 77. Teather particulars and application forms may be obtained from the Dean of the Faculty of Technology, Oxford Pulytechnik, Oxford OX3 011P, to whom applications, including the names of three referees, should be submitted by the appropriate date.

Middlesex Polytechnic

Applications are invited for the following posts for staff to teach on BA Honours degree courses in Art and Design:

Principal Lecturer in Fashion ie as irspensible for the fashion sies within the GA Henous in Tertifer/Fachion thise-year course,

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Principal Lecturer in Sculpture to tach on the 6A Honours in Fine Art Intra-your pourse.
Applicants for the above poste should have experience of teaching at degree level and appropriate

Principal Lectures, \$6,729 to \$8,367 pa inc. Lecturer II/Senior Lecturer, £4,041 to £7,206 pa Inc.

Pires sale for full stotals and an application form, station fault table post year and applying for, and post training of Appeliance Polytolinic, Bunds Green Road, Lundon Nil 2019. Closing this Novembel 2.

ULSTER COLLEGE THE NORTHERN IRELAND POLYTECHNIC Faculty of Education

Lecturer II in Retardation Salary Scale: £3,744 to £5,985

To sonttibule to the isecting end development of a taigly of pre-service and in-service courses in Reterdeton including a four year Honguis BEd degree.

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The Powischnic is a direct great institution with an independent Board of Governors. It opened in 1971 and how has a student opportation of some 6,100. It has stependent Board of Governors. If opened in 1971 bits than her situative new purposs bill accommodation including 190 tendential places on the 114 ecre compus overlooking he see at Jordanatown, a pleasant and guiet residential set. There is a scheme of easietence with removal. Further perticulars and application forms which must be stand by November 7 may be obtained by telephoning which (0231) 65131 ext 2243 or by writing to: The Elikiehment Officer, Ulater College, The Nothern Itsian Polytechnic, Shore Road, Newtownebbey, Co Anim 8137 008.

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in Economics

FACULTY OF SOCIAL SCIENCE Principal Lecturer

with special reference to Industrial Business Economics Selery: C5,940-C7,578 plus C492 supple

For application form and further particulare please apply in writing enclosing a loolscap slainped and ediffeseed envelops to the Assistant Sacratary (Parsonnal), Lanchaster Polylachnic, Priory Street, Coventry CV1 5F8, returnable by 31st October, 1977.

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Lecturer-Senior Lecturer in Mechanical Enginecring

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Research experience is im-portant for the lirst two of the above pusts.

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to teach Properties to Materials and either Stress Analysis or Dynamics

Lecturer---Senior Lecturer in Electrical ond Electronic Engineering to leach within one or more of the following areas: Electrical Circola Theory; Control; Elec-tronics.

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Application forms and fur-fier jerticulars or available, by penjeard zenjust, hiense, trong ilen Personnol Monapor 11/23, The One University, p. O. Nox 75, Italian Hall, Millian Keynes MRT GAL or by intrinsing from Millout for applications: November 4, 11/77.

Colleges and Institutes of Technology

> Robert Gerdon's Institute of Technology, Aberdeen School of Physics

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Graduete in Physics of Engineering with Interest in ultreconice non-obstruc-tive teeting or scousios. Two yeers eppointmen M.Phil. (CNAA) Registratio Salary 22,895 per annum.

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The College is a Scottist Contral Institution with a substantist and growing using a degree and diploms course. The Deputation of Electrical and Electronic Engineering provides courses leading to Honouse and unclassified agrees and to the Higher Idetonal Collificate, legislar with various specialist short courses. The pregen appointed may be eligible for a professorable and applicants should have appropriate academic qualifications, experience of textiling of degree favot and tolevant industrial and/or resourch experience, legislar with a proven account of administrative solilly. The serry is £8,192 per enquery.

Ferther particulars and application form obtainable from the Principal, Sunday College of Tacinology, Sell Street, Outdon, OS1 1HO, to whom completed application forms should be relevant by November 7, 1977.

Research

HEALTH EDUCATION STUDIES UNIT

Educational Research Officers

Two Educational Research Officers are required to work on the School Health Education and Research Project. They will work so members of the Hoolth Education Compatity as a sabitation Neoth Education Studies Unit in Cambridge, The Unit her been cotaggished for a five-year initial period and the Project Segins in Jenuary.

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A relevant lited degree and a capacity for systematic observation and research, and preven ability to work in a learn and in school are required. Although format toaching and reasonich qualifications much to aspecticize in the Health Education listed and in in-service with the approximately sequelant to Burnham Scale 2 (lower range). Socsadment within the scale AP24 23,049-24,222 dephasing Updiff appoint strange in cartain areas.

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Application in writing, enstooring OV relating your experience is the post, should be sent by 26th Octdoor, 1977, 1911
Mr. W. A. Tabbus, Diffice/Parsonnel Managur.
Thauth Education Council, 75 New Oxford Street, London WC1A 1AH.

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Librarians

Dorset Institute of Higher Education

Bournemouth and Weymouth Tutor/Librarian

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Application terms and further details from : The Director, Dorsol institute of Higher Education, Wellisdows Road, Pools, Dorsel, 5K12 5BB.

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Applications are invited for the following post in the Authority's Advisory Sarvice.

### **County Subject Adviser Technology and Heavy Crafts**

Candidates should be well qualified loachers with good experience in secondary schools. Experience in Further Education would be an advantage. The succeedul candidate will be expected not only to advise in his/her own epecialism, but also to undertake tialeon duties with a secondary school or schools and to work. with colleagues on a wide renge of essignments. SALARY: Burnham Heedteechers' Scele

Group 9. Selery range £6,969-£7,593 plue Supplements.

Application forms and further perticulars are evallable on receipt of a stamped addressed toolscap envelope quoting post reference OD/1,20.77. CLOSING DATE. The closing date for the receipt of completed application forms is Thursday, 3rd Novomber, 1977.

John Beele, Director of Educellon, Educollon Depail-ment, Princess House, Princess Way, Swanses.

#### Fellowships and Studentships

### British/Iranian Scientific **Exchange Scheme**

To slimulate trans-Dritish reliaberellen in science and technology, the hanism Ministry of Science and Higher Education and the Grillish Council have launched a new exchange schoor, which began in Acril. 1977. Brillish visitors ideally scientists or technologists with active respect, programming established in necessarch institution, will spend believe 2 and 10 months participating in resourch or Hind studies, or exploring prospects of cooperative work with lianuse collections. Applicate who sincody have confuscio with lianuse collections Applicate who sincody have confuscio with lianus collection will be diven producted for further details and application forth, please with or telephone to Dr. J. C. Viene, HESD (Higher Education and Science Operational). The Bitheli Council 10 Spring Granders, London Sivia 28N [Indiphone 01-930 2406 et lesson 2001].

BRADFORD THE UNIVERSITY
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Applicants may color in-ther particulars and modicipa-tion torms to be returned to ton torms to be returned to Secretary School of Modern Languages, Digital of Modern Languages, Digital of Stadern Spudford, hardford, teet Secretary of Mr. (1917), specially soforonce IS-ML\_TILL, specially

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Colleges of Education

### LANCASTER.

6. MARTIN'S EDELLICE Applications are inciton for the isset of PHINCIPAL LUIS TUINS! In ENGLISH to lead a new H.A. I thousard course to facilist therefore and asso-tally studies. The Phincipal ment is for the April, 1978, An interest in multi-disciplin-ery courses would be an adva-

Principal Lociurer Salary Further details and emplication form from The Principal B. Moriin's College, Lancasier, LAI 3JD,

Colleges of Higher Education

SCOTTISH COLLEGE OF TEXTILES

DEPARTMENT OF DESIGN

GRADE A.

Applications are invited from suitably qualified graduates in textile design for the post of Lecturer in Pabric Structures. The successful applicant will be required to teach the subject to first and second year students studying for the Collegs Associateship with Hunnuts in Textile Design, (The course is in the process of being converted to a BA classified and unclassified degree.) The person appointed will also be required to direct student design projects and to work closely with Locatres in other disciplines. Salary Scale Lecturer A—53,648-56,999 (bar at £6,516). Application forms (which should be returned couplated not later than Occioher 31, 1977), and further details from HEAD OF DEPARTMENT OF DESIGN, SCOTTISH COLLEGE OF TEXTILES, Galochiole. Telephone GALASHIELS 3351. The 1997 A

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Weet Sussex Institute of Higher Education

#### Senior Lecturer

in charge of training for

the social services (Senior Lecturer scale, Burnhom Further Education Report, £5.031-£5.955-ber-£8,186-£8,417 plus £320 plus

The Institute is lounding, with the Colleboration of the West Sussex County Council Social Service Department, a Social Service Training Contra. The succeedul condidate will initiate and land work in this centre and negotiote training with the County

Social Service Department and CCETSW. Wa era tooking for a groduate, qualified Sociol Worker with experience covering oil especie of social work training for this important new nost.
Further details and forms of application are obtainable from J. F. Wysti, Director, West Guesex Institute of

Higher Education, The Ooms, Upper Bognor Road, Bognor Regis, West Suesax, The closing date for applications will be 3rd November, 1977.

DERBY LONSDALE COLLEGE OF HIGHER EDUCATION

#### SENIOR LECTURER

GRAPHIC DESIGN

The post demends conneons with an interest in the whole area of visual communication in addition to anthuslesm for his or her own spacietism.
Salary: £5,031 to £5,955 per ennum plue eupplemants

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Application forms and further particulars may be obtained from the Sielfing Oilicer (reference DP), Derby Lonadsie College of Higher Education, Kedleston Road, Derby, OE3 1G8, to whom completed forms should be referred by Monday. 7th Monday 1875. returned by Monday, 7th November, 1977.

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Experienced Researcher

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Workers' Educational Association North Western District DISTRICT SECRETARY

Applications are invited for the post of Secretary to the N.W. District of the Workere Educational Association. The job of District Secretary entails the ability to work with voluntary members and professional stall in developing the work of the N.W. District in eccordance with the aims and objectives of the Association.

Selary Boela, C5,178 to £6,745 (under remew)

Further informellon end epplication forms to his returned by November 17, 1977) from The Acting Secretary Workers Educational Association N/W District Calletts io Adult Education, Cavendar Sirgel, Mahonester Missessi.

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The appointed will be expected to commence duly as early In 1978 as possible. Applications close on November 21, 1977.



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# DIRECTOR

Applications on Invited for the position of Origins of the Institute which will become yet on his July, 1978, which will become yet on his July, 1978, which will be made of the position of the light in 1982. It has an institution by special of a topy health in 1982. It has an institution of the light in the oducation of pursons for positions in continuing the position of the light in the oducation of pursons for positions in continuing as a College of Advanced Education by the Assistantian of the light in the oducation of pursons for positions in continuing and a concentration on fully provided and subject of the pursons of course are offered to 3,500 students 11977 or applied Science, graduate and industrated at lower in osess of the pulse of courses that of all cuttle continuing the position of the Institute occupies that of allow with computers a North 187 and 188 in the Institute occupies that of allow with computers approximately independent and whyolia, bitual of on Eyro banks approximately leided and all whyolia, bitual of on Eyro banks approximately applicants should possess high academic qualifications and and applicants should possess high academic qualifications and seal and infantation of a large multidisciplinary feritary streations institution.

ANNUAL SALARY AUS. \$36,479

Further Information may be obtained from the Chief Personal Chicer. South Averables Institute of Technology, Burth Tenata, Adapted South Australia, 6000.
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# THE LEVERHULME TRUST Research Awards 1978

The Coverhalme Trustees, through their Research Avende Advisors Committee, other in-

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11) FELLOWSHIPS AND GRANTS
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A faciled number of awards to strengthen the beaching of Limpean States in the innversalites and polyhedritics of this country. These stands are intended to moder senting intenders of the staffs of univer-site and polyhedritica in the United Kingdom to undertake advanced

gift and marked in the United Kitudian to undertake odynaced sady or research in a laterpoint earliery of countries, excluding the lithic litts, to their graticolar in the country directly in consult the research of a study of interval. The leducation are designed to enable whichers in this country directly in consult their readents collegues in Europe and to have meets to souther of edginal outerints.

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The election date for applications there is 1 June, 1978, and for the 1977. The award must be laken up between the June, 1978, and for the 1977.

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softialities are supported in the Arra and Social Studies Executive or Building and Social Studies Executive or Building and Social Studies and Social Studies of Social Studies and Social Studies and Social Studies of Social Studies and Soci

The results of application for the above awards will be communicated to his candidates in April; 1978: Application forms and further latternation from The Secretary. Research Awards: Advisory Committee, The Leverhume INR: Telephone: 01.248 1910.

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Applications are invest from both need and women for pensionable posts in the Department of Agriculture at Loughty College of Agriculture and Food Technology. Cookslown, Co. Tyrone.

The work involves providing training in Human Communication for people working within the Agriculture and Food Industries, e.g., in Education I formal and extension) and marketing. There are lour main programme areas in the Department: formal training including a postgraduele course leading to a Olphone ewerded by Queen's University of Beltast; induction end in-service training; advice and development and respects.— Post 1 Special Interest in Adult Education and Rurel Resource Development

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Preference may be given to applicants with qualifications

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Poel 2 Special Interest in Marketing and Management An Honours Degree and/or post-graduate rivalitization in inal keting, management or related areas is required. Relavent work experisnen, particularly in the agricultural and food processing industries, is desirable.

Post 3 Special Interest in Psychology and Social Psychology of Education and Changa An Honoure Dagree and/or post-graduate qualification in

An Honoure Dagree and/or post-graduate qualification in addication or related areas is required. Preference may be given to applicants who have or ore eligible for, membership of the British Psychological Society.

Relevant practical experience in formal education, extension education or manegement development, is distrible. The euccessful candidate may have recognised isacher statue at the Queen's University, Belfast.

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